

National Testing Agency

Question Paper Name :	Statistics Eng 08th June 2023 Shift 1
Subject Name :	Statistics Eng
Creation Date :	2023-06-11 14:18:36
Duration :	120
Total Marks :	400
Display Marks:	Yes

Statistics

Group Number :	1
Group Id :	92090663
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	400
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Part A

Section Id :	920906125
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	21
Number of Questions to be attempted :	21
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	920906197
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 9209066271 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes
Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (1 to 5)
Question Label : Comprehension

Mumbai message

Shinde survives. But SC makes clear party has primacy over legislative wing- big implications.

A constitutional bench of the supreme court yesterday ruled on the legal complication stemming from the fall of Maharashtra's MVA government in June 2022. The current government comprising BJP and the Eknath Shinde faction of Shiv Sena is safe. Yet, the role of then governor BS Keshari in the formation of the government by calling for a no-confidence motion against the government erstwhile Uddhav Thackeray-led MVA has been severely criticized by SC and declared incorrect. However, as Thackeray resigned before the floor test there is no legal remedy available now the bench said. But it's still a consequential judgment that will henceforth be used to judge the legality of defection-led changes in government. SC has used the constitution's tenth schedule –meant to prevent opportunistic defections- as the reference point to reach its conclusions. The most important one is that a political party is superior to its legislative wing. The whip on voting represents the will of party, and not its legislators. It's the party that appoints its whip and the house leader. It means political parties now have a greater degree of protection against defection by legislators. This may mean that the current Maharashtra assembly speaker, BJP's Rahul Narwekar, cannot rely on just numbers but has to use Shiv Sena's constitution to identify the party's whip and leader to decide on pending disqualification proceedings. The speaker is the key player in the tenth schedule. Here the SC judgment is not conclusive. It referred one of its relevant earlier judgement (Nabam Rebia case) to a large bench because of contradictory reasoning". In the interim, it's given the speaker power to helm proceedings on defection, subject to judicial review. The other critical actor in defection is the state's governor. Here, SC has once again emphasized that they have limited discretionary power and cannot enter the political arena. A floor test is not the platform to resolve intraparty disputes, which is where Keshari's role has been criticised. The underlying principles on limited discretion also apply to governors elsewhere. This judgment should be read by all governors who see their role as meddlers in executive affairs SC's stance is very clear. The rajyapals should take note.

Sub questions

Question Number : 1 Question Id : 9209066272 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

The word meddle refers to: _____

- (1) Mediator, who brings about an agreement.
- (2) Medial, that is situated in middle.
- (3) One who interferes that is not one's concern.
- (4) Meek, one who is gentle.

Options :

- 92090624801. 1
- 92090624802. 2
- 92090624803. 3
- 92090624804. 4

Question Number : 2 Question Id : 9209066273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

- Statement I : The Supreme Court criticized B S Koshiyari the then governor of Maharashtra in its ruling.
- Statement II : There is no legal remedy available now as Thackeray did not resign after the floor test.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is true but Statement II is incorrect
- (4) Statement I is false but Statement II is correct

Options :

- 92090624805. 1
- 92090624806. 2
- 92090624807. 3
- 92090624808. 4

Question Number : 3 Question Id : 9209066274 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements read the following statements:

Statement I : A floor test is not the platform to resolve interparty dispute.

Statement II : The principle's on limited discretion is applicable to governor B S Koshiyari only.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is true but Statement II is incorrect
- (4) Statement I is false but Statement II is correct

Options :

- 92090624809. 1
- 92090624810. 2
- 92090624811. 3
- 92090624812. 4

Question Number : 4 Question Id : 9209066275 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Discretionary power means:

- (1) Power to rule lawlessly.
- (2) Power to protect people of all religions.
- (3) Freedom to do thing as per law or rule.
- (4) The power or freedom to decide on a course of action.

Options :

- 92090624813. 1
- 92090624814. 2
- 92090624815. 3
- 92090624816. 4

Question Number : 5 Question Id : 9209066276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Supreme Court referred Nabam Rebia case to a larger bench because of contradictory reasoning means the case was:

- (A) relevant earlier judgement, of a High Court.
- (B) relevant earlier judgement of a smaller bench.
- (C) based on reasonings similar in nature.
- (D) based on such reasoning which were denying the truth by asserting the opposite.

(1) (A), (B)

(2) (B), (C)

(3) (A), (C)

(4) (B), (D)

Options :

92090624817. 1

92090624818. 2

92090624819. 3

92090624820. 4

Question Id : 9209066271 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (1 to 5)

Question Label : Comprehension

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Sub questions

Question Number : 1 Question Id : 9209066272 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The word meddle refers to: _____

- (1) Mediator, who brings about an agreement.
- (2) Medial, that is situated in middle.
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- (4) Meek, one who is gentle.

Options :

92090624801. 1

92090624802. 2

92090624803. 3

92090624804. 4

Question Number : 2 Question Id : 9209066273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : The Supreme Court criticized B S Koshiyari the then governor of Maharashtra in its ruling.

Statement II : There is no legal remedy available now as Thackeray did not resign after the floor test.

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Options :

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92090624806. 2

92090624807. 3

92090624808. 4

Question Number : 3 Question Id : 9209066274 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Given below are two statements read the following statements:

Statement I : A floor test is not the platform to resolve interparty dispute.

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- (4) Statement I is false but Statement II is correct

Options :

- 92090624809. 1
- 92090624810. 2
- 92090624811. 3
- 92090624812. 4

Question Number : 4 Question Id : 9209066275 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Discretionary power means:

- (1) Power to rule lawlessly.
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- (4) The power or freedom to decide on a course of action.

Options :

- 92090624813. 1
- 92090624814. 2
- 92090624815. 3
- 92090624816. 4

Question Number : 5 Question Id : 9209066276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum

Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Supreme Court referred Nabam Rebia case to a larger bench because of contradictory reasoning means the case was:

- (A) relevant earlier judgement, of a High Court.
- (B) relevant earlier judgement of a smaller bench.
- (C) based on reasonings similar in nature.
- (D) based on such reasoning which were denying the truth by asserting the opposite.

(1) (A), (B)

(2) (B), (C)

(3) (A), (C)

(4) (B), (D)

Options :

92090624817. 1

92090624818. 2

92090624819. 3

92090624820. 4

Sub-Section Number :

2

Sub-Section Id :

920906198

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 6 Question Id : 9209066277 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Your behavior is not cricket means you have not behaved_____

- (1) in intelligent manner
- (2) in an honourble way
- (3) As a dark horse
- (4) in a couragious manner.

Options :

92090624821. 1

92090624822. 2

92090624823. 3

92090624824. 4

Question Number : 6 Question Id : 9209066277 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Your behavior is not cricket means you have not behaved_____

- (1) in intelligent manner
- (2) in an honourble way
- (3) As a dark horse
- (4) in a couragious manner.

Options :

- 92090624821. 1
- 92090624822. 2
- 92090624823. 3
- 92090624824. 4

Question Number : 7 Question Id : 9209066278 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The most suitable antonym of the given word "PROHIBIT" is:

- (1) Grant
- (2) Agree
- (3) Permit
- (4) Accept

Options :

- 92090624825. 1
- 92090624826. 2
- 92090624827. 3
- 92090624828. 4

Question Number : 7 Question Id : 9209066278 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The most suitable antonym of the given word "PROHIBIT" is:

- (1) Grant
- (2) Agree
- (3) Permit
- (4) Accept

Options :

- 92090624825. 1
- 92090624826. 2
- 92090624827. 3

92090624828. 4

Question Number : 8 Question Id : 9209066279 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The synonym of the word "PATRONAGE" is:

- (1) Donation
- (2) Support
- (3) Espionage
- (4) Beneficiary

Options :

92090624829. 1

92090624830. 2

92090624831. 3

92090624832. 4

Question Number : 8 Question Id : 9209066279 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The synonym of the word "PATRONAGE" is:

- (1) Donation
- (2) Support
- (3) Espionage
- (4) Beneficiary

Options :

92090624829. 1

92090624830. 2

92090624831. 3

92090624832. 4

Question Number : 9 Question Id : 9209066280 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the option that improves the given statement grammatically. A majority of students believe that the examinations are unnecessary.

- (1) A majority of students believe that the examinations are unnecessary.
- (2) A majority of students believe that the examinations have been necessary.
- (3) A majority of students believe that the examinations are being necessary.
- (4) No improvement.

Options :

- 92090624833. 1
- 92090624834. 2
- 92090624835. 3
- 92090624836. 4

Question Number : 9 Question Id : 9209066280 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the option that improves the given statement grammatically. A majority of students believe that the examinations are unnecessary.

- (1) A majority of students believe that the examinations are unnecessary.
- (2) A majority of students believe that the examinations have been necessary.
- (3) A majority of students believe that the examinations are being necessary.
- (4) No improvement.

Options :

- 92090624833. 1
- 92090624834. 2
- 92090624835. 3
- 92090624836. 4

Question Number : 10 Question Id : 9209066281 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A place with circular currents of water, which can pull objects down into it: -

- | | |
|----------------|---------------|
| (1) Wheel lock | (2) Wheelic |
| (3) Wheeler | (4) Whirlpool |

Options :

- 92090624837. 1

92090624838. 2

92090624839. 3

92090624840. 4

Question Number : 10 Question Id : 9209066281 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A place with circular currents of water, which can pull objects down into it: -

- | | |
|----------------|---------------|
| (1) Wheel lock | (2) Wheelic |
| (3) Wheeler | (4) Whirlpool |

Options :

92090624837. 1

92090624838. 2

92090624839. 3

92090624840. 4

Question Number : 11 Question Id : 9209066282 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A certain sum of money invested on simple intrest at 15% per annual fetched Rs.10,350 as intrest in 3 years find the sum invested

- (1) Rs.22800
- (2) Rs.23000
- (3) Rs.24000
- (4) Rs.24500

Options :

92090624841. 1

92090624842. 2

92090624843. 3

92090624844. 4

Question Number : 11 Question Id : 9209066282 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A certain sum of money invested on simple interest at 15% per annum fetched Rs.10,350 as interest in 3 years find the sum invested

- (1) Rs.22800
- (2) Rs.23000
- (3) Rs.24000
- (4) Rs.24500

Options :

- 92090624841. 1
- 92090624842. 2
- 92090624843. 3
- 92090624844. 4

Question Number : 12 Question Id : 9209066283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A solid metallic sphere of radius 30cm is dropped into a cylindrical vessel of diameter 80cm if the vessel is partly filled with water and the sphere dropped in it is completely immersed then by how much the water level increases?

- (1) 25cm
- (2) 22.5cm
- (3) 22cm
- (4) 21.8cm

Options :

- 92090624845. 1
- 92090624846. 2
- 92090624847. 3
- 92090624848. 4

Question Number : 12 Question Id : 9209066283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A solid metallic sphere of radius 30cm is dropped into a cylindrical vessel of diameter 80cm if the vessel is partly filled with water and the sphere dropped in it is completely immersed then by how much the water level increases?

- (1) 25cm
- (2) 22.5cm
- (3) 22cm
- (4) 21.8cm

Options :

- 92090624845. 1
- 92090624846. 2
- 92090624847. 3
- 92090624848. 4

Question Number : 13 Question Id : 9209066284 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Shaloo started a business by investing Rs. 42000. After 2 month Reena joined her by investing Rs. 35000. Profit at the end of 10 month was Rs.315% Reena's share in the profit (in Rs.) is:

- | | |
|------------|------------|
| (1) 12,400 | (2) 12,628 |
| (3) 12,825 | (4) 12,980 |

Options :

- 92090624849. 1
- 92090624850. 2
- 92090624851. 3
- 92090624852. 4

Question Number : 13 Question Id : 9209066284 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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- | | |
|------------|------------|
| (1) 12,400 | (2) 12,628 |
| (3) 12,825 | (4) 12,980 |

Options :

- 92090624849. 1

92090624850. 2

92090624851. 3

92090624852. 4

Question Number : 14 Question Id : 9209066285 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Find the value of "x" is the following $10^2 + 7^2 + 243^{\frac{1}{3}} = x^2 + 5$

(1) 21

(2) 22

(3) 23

(4) 24

Options :

92090624853. 1

92090624854. 2

92090624855. 3

92090624856. 4

Question Number : 14 Question Id : 9209066285 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Find the value of "x" is the following $10^2 + 7^2 + 243^{\frac{1}{3}} = x^2 + 5$

(1) 21

(2) 22

(3) 23

(4) 24

Options :

92090624853. 1

92090624854. 2

92090624855. 3

92090624856. 4

Question Number : 15 Question Id : 9209066286 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A man covers a distance of 1200km in 70 days reasting 9 hours a day. If he rest 10 hours a day and walk with speed $1\frac{1}{2}$ times of the previous speed then in how many days will he cover 840km?

- | | |
|--------|--------|
| (1) 39 | (2) 33 |
| (3) 35 | (4) 37 |

Options :

92090624857. 1
92090624858. 2
92090624859. 3
92090624860. 4

Question Number : 15 Question Id : 9209066286 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A man covers a distance of 1200km in 70 days reasting 9 hours a day. If he rest 10 hours a day and walk with speed $1\frac{1}{2}$ times of the previous speed then in how many days will he cover 840km?

- | | |
|--------|--------|
| (1) 39 | (2) 33 |
| (3) 35 | (4) 37 |

Options :

92090624857. 1
92090624858. 2
92090624859. 3
92090624860. 4

Question Number : 16 Question Id : 9209066287 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Pointing to gentleman, ravi said, "his only brother is the father of my daughter father.how is the gentleman related to Ravi?

- (1) Grandfather
(2) Father
(3) Uncle
(4) Brother- in- low

Options :

92090624861. 1
92090624862. 2
92090624863. 3
92090624864. 4

Question Number : 16 Question Id : 9209066287 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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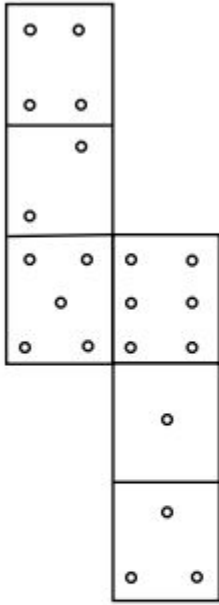
Options :

92090624861. 1
92090624862. 2
92090624863. 3
92090624864. 4

Question Number : 17 Question Id : 9209066288 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

How many dots lie opposite to the face having three dots, when the given figure is to form a cube?



- (1) 2
- (2) 4
- (3) 5
- (4) 6

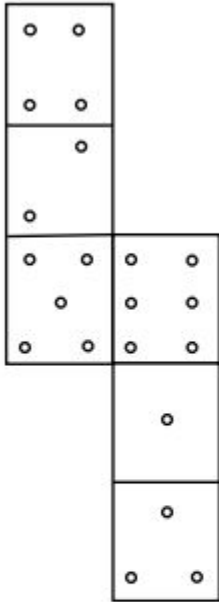
Options :

- 92090624865. 1
- 92090624866. 2
- 92090624867. 3
- 92090624868. 4

Question Number : 17 Question Id : 9209066288 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

How many dots lie opposite to the face having three dots, when the given figure is to form a cube?



- (1) 2
- (2) 4
- (3) 5
- (4) 6

Options :

- 92090624865. 1
- 92090624866. 2
- 92090624867. 3
- 92090624868. 4

Question Number : 18 Question Id : 9209066289 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the correct option for the missing term 354: 349:: 478?

- (1) 470
- (2) 487
- (3) 471
- (4) 474

Options :

- 92090624869. 1

92090624870. 2

92090624871. 3

92090624872. 4

Question Number : 18 Question Id : 9209066289 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the correct option for the missing term 354: 349:: 478?

- (1) 470
- (2) 487
- (3) 471
- (4) 474

Options :

92090624869. 1

92090624870. 2

92090624871. 3

92090624872. 4

Question Number : 19 Question Id : 9209066290 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Answer the following question by studying the statement and assumptions.

Statement: - It is desirable to put the child in school at the age of 5 or 50.

Assumptions: - I. At that age the child reaches appropriate level of development and is ready to learn.

II. The schools do not admit children after six years of age.

- (1) Only assumption I is implicit.
- (2) Only assumption II is implicit.
- (3) Either I or II is implicit.
- (4) Neither I or II is implicit.

Options :

92090624873. 1

92090624874. 2

92090624875. 3

92090624876. 4

Question Number : 19 Question Id : 9209066290 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Answer the following question by studying the statement and assumptions.

Statement: - It is desirable to put the child in school at the age of 5 or 50.

Assumptions: - I. At that age the child reaches appropriate level of development and is ready to learn.

II. The schools do not admit children after six years of age.

- (1) Only assumption I is implicit.
- (2) Only assumption II is implicit.
- (3) Either I or II is implicit.
- (4) Neither I or II is implicit.

Options :

- 92090624873. 1
- 92090624874. 2
- 92090624875. 3
- 92090624876. 4

Question Number : 20 Question Id : 9209066291 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Kavita walks 10 km towards north. From there, she walks 6 km towards south. Then, she walks 3 km towards east. How far and in which direction is she with reference to her starting point

- (1) 10 km northwest
- (2) 6 km southwest
- (3) 5 km southwest
- (4) 5 km northeast

Options :

- 92090624877. 1
- 92090624878. 2
- 92090624879. 3
- 92090624880. 4

Question Number : 20 Question Id : 9209066291 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Kavita walks 10 km towards north. From there, she walks 6 km towards south. Then, she walks 3 km towards east. How far and in which direction is she with reference to her starting point

- (1) 10 km northwest
- (2) 6 km southwest
- (3) 5 km southwest
- (4) 5 km northeast

Options :

- 92090624877. 1
- 92090624878. 2
- 92090624879. 3
- 92090624880. 4

Question Number : 21 Question Id : 9209066292 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II :

List I	List II
Term	Deal with
(A) Obstetrics	(I) Vegetable growing
(B) Odonntography	(II) Branch of mediciane dealing with preghang
(C) Olericulture	(III) The storsy of bones
(D) Osteology	(IV) ascience and story of teeth

Choose the correct answer from the options given below:

- (1) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
- (2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (3) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
- (4) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)

Options :

- 92090624881. 1
- 92090624882. 2
- 92090624883. 3
- 92090624884. 4

Question Number : 21 Question Id : 9209066292 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II :

List I	List II
Term	Deal with
(A) Obstetrics	(I) Vegetable growing
(B) Odonntography	(II) Branch of mediciane dealing with preghang
(C) Olericulture	(III) The storsy of bones
(D) Osteology	(IV) ascience and story of teeth

Choose the correct answer from the options given below:

- (1) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
- (2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (3) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
- (4) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)

Options :

92090624881. 1
92090624882. 2
92090624883. 3
92090624884. 4

Question Number : 22 Question Id : 9209066293 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which hydrocarbons are the major constitvents of LPG?

- (1) Methan only
- (2) Methan and Ethans
- (3) Propane and Benzane
- (4) Propane and Ethane

Options :

92090624885. 1
92090624886. 2
92090624887. 3
92090624888. 4

Question Number : 22 Question Id : 9209066293 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which hydrocarbons are the major constituents of LPG?

- (1) Methan only
- (2) Methan and Ethans
- (3) Propane and Benzane
- (4) Propane and Ethane

Options :

- 92090624885. 1
- 92090624886. 2
- 92090624887. 3
- 92090624888. 4

Question Number : 23 Question Id : 9209066294 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correct statements are:

- (A) The first person to enter space is Edward White.
- (B) The first country to send man on the moon is USA.
- (C) The first Indian to go into space is Rakesh Sharma.
- (D) The first country to send mars orbiter in first attempt is China.

Choose the correct answer from the options given below :

- (1) (A) & (B) only
- (2) (A), (B) and (C) only
- (3) (B) and (D) only
- (4) (B) and (C) only

Options :

- 92090624889. 1
- 92090624890. 2
- 92090624891. 3
- 92090624892. 4

Question Number : 23 Question Id : 9209066294 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The correct statements are:

- (A) The first person to enter space is Edward White.
- (B) The first country to send man on the moon is USA.
- (C) The first Indian to go into space is Rakesh Sharma.
- (D) The first country to send mars orbiter in first attempt is China.

Choose the correct answer from the options given below :

- (1) (A) & (B) only
- (2) (A), (B) and (C) only
- (3) (B) and (D) only
- (4) (B) and (C) only

Options :

- 92090624889. 1
- 92090624890. 2
- 92090624891. 3
- 92090624892. 4

Question Number : 24 Question Id : 9209066295 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the Vedas mainly consists of a melodic format or verses set as lyrical composition?

- (1) Yajur Veda
- (2) Sam Veda
- (3) Atharvea Veda
- (4) Rig Veda

Options :

- 92090624893. 1
- 92090624894. 2
- 92090624895. 3
- 92090624896. 4

Question Number : 24 Question Id : 9209066295 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the Vedas mainly consists of a melodic format or verses set as lyrical composition?

- (1) Yajur Veda
- (2) Sam Veda
- (3) Atharvea Veda
- (4) Rig Veda

Options :

- 92090624893. 1
- 92090624894. 2
- 92090624895. 3
- 92090624896. 4

Question Number : 25 Question Id : 9209066296 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : The idea of single citizenship in the constitution of India is adapted from British constitution

Statement II : Fundamental duties under article 31-A of Indian constitution is adapted from French constitution

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is true but Statement II is incorrect
- (4) Statement I is false but Statement II is correct

Options :

- 92090624897. 1
- 92090624898. 2
- 92090624899. 3
- 92090624900. 4

Question Number : 25 Question Id : 9209066296 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4 Wrong Marks : 1

Given below are two statements :

Statement I : The idea of single citizenship in the constitution of India is adapted from British constitution

Statement II : Fundamental duties under article 31-A of Indian constitution is adapted from French constitution

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is true but Statement II is incorrect
- (4) Statement I is false but Statement II is correct

Options :

- 92090624897. 1
- 92090624898. 2
- 92090624899. 3
- 92090624900. 4

Part B: Statistics

Section Id :	920906126
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Enable Mark as Answered Mark for Review and Clear Response :	Yes

Maximum Instruction Time : 0
Sub-Section Number : 1
Sub-Section Id : 920906199
Question Shuffling Allowed : Yes
Is Section Default? : null

Question Number : 26 Question Id : 9209066297 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The infinite series $\sum \left(\frac{1}{n^{2+3\delta}} + \frac{1}{n^{-1-7\delta}} \right)$ is convergent if δ lies in the interval

- (1) $\left(-\frac{1}{3}, \infty \right)$ (2) $\left(-\frac{1}{3}, -\frac{2}{7} \right)$
(3) $\left(-\infty, -\frac{2}{7} \right)$ (4) $\left(-\frac{2}{7}, \infty \right)$

Options :

92090624901. 1
92090624902. 2
92090624903. 3
92090624904. 4

Question Number : 26 Question Id : 9209066297 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अनन्तः श्रेणी $\sum \left(\frac{1}{n^{2+3\delta}} + \frac{1}{n^{-1-7\delta}} \right)$ अभिसारी है यदि δ अंतराल में विद्यमान है -

- (1) $\left(-\frac{1}{3}, \infty \right)$ (2) $\left(-\frac{1}{3}, -\frac{2}{7} \right)$
(3) $\left(-\infty, -\frac{2}{7} \right)$ (4) $\left(-\frac{2}{7}, \infty \right)$

Options :

92090624901. 1
92090624902. 2
92090624903. 3
92090624904. 4

Question Number : 27 Question Id : 9209066298 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Suppose $m > 1$ and $n > 1$ are two positive integers and the positive-termed series $\sum u_n$ and $\sum v_n$ are such that $\frac{u_n}{u_{n+1}} \geq \frac{v_n}{v_{n+1}}$ for all $n \geq m$. Then $\sum u_n$ is convergent if

- | | |
|------------------------------|--|
| (1) $\sum v_n$ is convergent | (2) $\sum \frac{1}{v_n}$ is convergent |
| (3) $\sum v_n$ is divergent | (4) $\sum \frac{1}{v_n^2}$ is convergent |

Options :

92090624905. 1
92090624906. 2
92090624907. 3
92090624908. 4

Question Number : 27 Question Id : 9209066298 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $m > 1$ तथा $n > 1$ दो घनात्मक पूर्णांक हैं तथा घनात्मक पदों की श्रेणी $\sum u_n$ तथा $\sum v_n$ इस प्रकार है कि $\frac{u_n}{u_{n+1}} \geq \frac{v_n}{v_{n+1}}$, $n \geq m$ की सभी मानों के लिए। तब $\sum u_n$ अभिसारी है यदि

- | | |
|---------------------------|---------------------------------------|
| (1) $\sum v_n$ अभिसारी है | (2) $\sum \frac{1}{v_n}$ अभिसारी है |
| (3) $\sum v_n$ अपसारी है | (4) $\sum \frac{1}{v_n^2}$ अभिसारी है |

Options :

92090624905. 1
92090624906. 2
92090624907. 3
92090624908. 4

Question Number : 28 Question Id : 9209066299 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If the sequences $\langle a_n \rangle \rightarrow 5$ and $\langle b_n \rangle \rightarrow \frac{1}{5}$, then the value of $\lim_{n \rightarrow \infty} \frac{1}{n} [a_n b_1 + a_{n-1} b_2 + \dots + a_1 b_n]$ is equal to :

- | | |
|-------------------|--------------------|
| (1) 1 | (2) 25 |
| (3) $\frac{1}{5}$ | (4) $\frac{1}{25}$ |

Options :

- 92090624909. 1
- 92090624910. 2
- 92090624911. 3
- 92090624912. 4

Question Number : 28 Question Id : 9209066299 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि अनुक्रम $\langle a_n \rangle \rightarrow 5$ तथा $\langle b_n \rangle \rightarrow \frac{1}{5}$ है, तब $\lim_{n \rightarrow \infty} \frac{1}{n} [a_n b_1 + a_{n-1} b_2 + \dots + a_1 b_n]$ का मान बराबर है-

- | | |
|-------------------|--------------------|
| (1) 1 | (2) 25 |
| (3) $\frac{1}{5}$ | (4) $\frac{1}{25}$ |

Options :

- 92090624909. 1
- 92090624910. 2
- 92090624911. 3
- 92090624912. 4

Question Number : 29 Question Id : 9209066300 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sequence $\{a_n\}$ defined by $a_1 = \sqrt{2}$ and $a_{n+1} = \sqrt{2 + a_n}$ converges to

- | | |
|----------------|----------------|
| (1) 1 | (2) 2 |
| (3) $\sqrt{3}$ | (4) $\sqrt{2}$ |

Options :

- 92090624913. 1
- 92090624914. 2
- 92090624915. 3
- 92090624916. 4

Question Number : 29 Question Id : 9209066300 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अनुक्रम $\{a_n\}$ इस प्रकार से परिभाषित है कि $a_1 = \sqrt{2}$ तथा $a_{n+1} = \sqrt{2 + a_n}$, तब अनुक्रम अभिसारित होती है -

- | | |
|----------------|----------------|
| (1) 1 | (2) 2 |
| (3) $\sqrt{3}$ | (4) $\sqrt{2}$ |

Options :

92090624913. 1
92090624914. 2
92090624915. 3
92090624916. 4

Question Number : 30 Question Id : 9209066301 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If the sequence $\langle u_n \rangle$ is positive termed and monotonic decreasing sequence, then the infinite series $\sum u_n$ converges if

- | | |
|---|--|
| (1) $u_n \rightarrow 0$ as $n \rightarrow \infty$ | (2) $\frac{1}{n} u_n \rightarrow 0$ as $n \rightarrow \infty$ |
| (3) $\langle nu_n \rangle$ is a bounded sequence | (4) $u_n \rightarrow 0$ and $nu_n \rightarrow 0$ as $n \rightarrow \infty$ |

Options :

92090624917. 1
92090624918. 2
92090624919. 3
92090624920. 4

Question Number : 30 Question Id : 9209066301 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि अनुक्रम $\langle u_n \rangle$ एक धनात्मक पद तथा एकदिष्ट ह्रासमान अनुक्रम है, तब अनन्त श्रेणी $\sum u_n$ अभिसारित होती है, यदि

- | | |
|---|--|
| (1) $u_n \rightarrow 0$ जब $n \rightarrow \infty$ | (2) $\frac{1}{n} u_n \rightarrow 0$ जब $n \rightarrow \infty$ |
| (3) $\langle nu_n \rangle$ एक परिबद्ध अनुक्रम है | (4) $u_n \rightarrow 0$ तथा $nu_n \rightarrow 0$ जब $n \rightarrow \infty$ |

Options :

92090624917. 1
92090624918. 2
92090624919. 3
92090624920. 4

Question Number : 31 Question Id : 9209066302 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $f(x) = lx^2 + mx + n$, $x \in [a, b]$, then point C given by Lagrange Mean Value Theorem is given by

(1) $\frac{l+m}{2}$

(2) $\sqrt{lm}$

(3) $\sqrt{ab}$

(4) $\frac{a+b}{2}$

Options :

92090624921. 1

92090624922. 2

92090624923. 3

92090624924. 4

Question Number : 31 Question Id : 9209066302 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $f(x) = lx^2 + mx + n$, $x \in [a, b]$, तब लग्रान्ज माध्य मान प्रमेय, परा बिन्दु C दिया जाता है -

(1) $\frac{l+m}{2}$

(2) $\sqrt{lm}$

(3) $\sqrt{ab}$

(4) $\frac{a+b}{2}$

Options :

92090624921. 1

92090624922. 2

92090624923. 3

92090624924. 4

Question Number : 32 Question Id : 9209066303 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $2x^3 + 7x^2 + x - 6 = 2(x-2)^3 + \alpha(x-2)^2 + \beta(x-2) + \gamma$, then value of $\alpha + \beta + \gamma$, is

(1) 19

(2) 53

(3) 40

(4) 112

Options :

92090624925. 1

92090624926. 2

92090624927. 3

92090624928. 4

Question Number : 32 Question Id : 9209066303 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $2x^3 + 7x^2 + x - 6 = 2(x - 2)^3 + \alpha(x - 2)^2 + \beta(x - 2) + \gamma$ तब $\alpha + \beta + \gamma$ का मान है-

(1) 19

(2) 53

(3) 40

(4) 112

Options :

92090624925. 1

92090624926. 2

92090624927. 3

92090624928. 4

Question Number : 33 Question Id : 9209066304 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $f : R^2 \rightarrow R$ be defined by

$$f(x, y) = \begin{cases} \frac{3x^2 + y^2}{\sqrt{9x^2 + 3y^2 + 1} - 1}, & (x, y) \neq (0, 0), \\ \lambda, & (x, y) = (0, 0) \end{cases}$$

The value of λ , so that f is continuous at $(0, 0)$, is

(1) 2/3

(2) 1

(3) 9

(4) 18

Options :

92090624929. 1

92090624930. 2

92090624931. 3

92090624932. 4

Question Number : 33 Question Id : 9209066304 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $f : R^2 \rightarrow R$ इस प्रकार परिभाषित है कि

$$f(x, y) = \begin{cases} \frac{3x^2 + y^2}{\sqrt{9x^2 + 3y^2 + 1} - 1}, & (x, y) \neq (0, 0), \\ \lambda, & (x, y) = (0, 0) \end{cases}$$

λ के किस मान के लिए $f, (0, 0)$ पर सतत् है

- | | |
|---------|--------|
| (1) 2/3 | (2) 1 |
| (3) 9 | (4) 18 |

Options :

92090624929. 1
92090624930. 2
92090624931. 3
92090624932. 4

Question Number : 34 Question Id : 9209066305 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The number of roots of the equation $f(x) = x^3 - x + 1 = 0$ that lie between 0 and 1 is

- | | |
|-------|-------|
| (1) 0 | (2) 1 |
| (3) 2 | (4) 3 |

Options :

92090624933. 1
92090624934. 2
92090624935. 3
92090624936. 4

Question Number : 34 Question Id : 9209066305 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

समीकरण $f(x) = x^3 - x + 1 = 0$ के मूलों की संख्या जो 0 तथा 1 के बीच विद्यमान है, हैं -

- | | |
|-------|-------|
| (1) 0 | (2) 1 |
| (3) 2 | (4) 3 |

Options :

92090624933. 1
92090624934. 2
92090624935. 3
92090624936. 4

Question Number : 35 Question Id : 9209066306 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$$\lim_{t \rightarrow 0} \frac{e^{2t} - 2(e^t - e^{-t}) + \log(1 + 2t) - 1}{2t^3} =$$

(1) $\frac{5}{3}$

(2) -1

(3) 2

(4) -2

Options :

92090624937. 1

92090624938. 2

92090624939. 3

92090624940. 4

Question Number : 35 Question Id : 9209066306 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$$\lim_{t \rightarrow 0} \frac{e^{2t} - 2(e^t - e^{-t}) + \log(1 + 2t) - 1}{2t^3} =$$

(1) $\frac{5}{3}$

(2) -1

(3) 2

(4) -2

Options :

92090624937. 1

92090624938. 2

92090624939. 3

92090624940. 4

Question Number : 36 Question Id : 9209066307 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $A = \{(x, y, z), x > 0, y > 0, z > 0 \text{ and } x + y + z \leq 1\}$. Then value of

$\iiint_A (x + y + z) dx dy dz$ is equal to

- | | |
|------------|------------|
| (1) $1/8$ | (2) $1/12$ |
| (3) $1/24$ | (4) $1/36$ |

Options :

92090624941. 1
92090624942. 2
92090624943. 3
92090624944. 4

Question Number : 36 Question Id : 9209066307 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $A = \{(x, y, z), x > 0, y > 0, z > 0 \text{ तथा } x + y + z \leq 1\}$ तब $\iiint_A (x + y + z) dx dy dz$ का मान बराबर है -

- | | |
|------------|------------|
| (1) $1/8$ | (2) $1/12$ |
| (3) $1/24$ | (4) $1/36$ |

Options :

92090624941. 1
92090624942. 2
92090624943. 3
92090624944. 4

Question Number : 37 Question Id : 9209066308 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Volume generated by revolving ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ about x -axis is

- | | |
|----------------------------|----------------------------|
| (1) $\frac{1}{3} \pi ab^2$ | (2) $\frac{2}{3} \pi ab^2$ |
| (3) $\frac{4}{3} \pi ab^2$ | (4) $4 \pi ab^2$ |

Options :

92090624945. 1
92090624946. 2
92090624947. 3

Question Number : 37 Question Id : 9209066308 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

x - अक्ष के चारों ओर परिक्रामी दीर्घवृत्त $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ द्वारा जनित आयतन है -

- | | |
|----------------------------|----------------------------|
| (1) $\frac{1}{3} \pi ab^2$ | (2) $\frac{2}{3} \pi ab^2$ |
| (3) $\frac{4}{3} \pi ab^2$ | (4) $4 \pi ab^2$ |

Options :

92090624945. 1
92090624946. 2
92090624947. 3
92090624948. 4

Question Number : 38 Question Id : 9209066309 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If N is any positive integer and $\delta_n = \int_0^N \binom{u}{n} \binom{N-u}{N-n} du$, then the value of $\sum_{n=0}^N \delta_n$, is

- | | |
|-----------|-------------------|
| (1) 0 | (2) N |
| (3) N^2 | (4) $\frac{1}{N}$ |

Options :

92090624949. 1
92090624950. 2
92090624951. 3
92090624952. 4

Question Number : 38 Question Id : 9209066309 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि N कोई घनात्मक पूर्णांक है तथा $\delta_n = \int_0^N \binom{u}{n} \binom{N-u}{N-n} du$, तब $\sum_{n=0}^N \delta_n$ का मान है -

- | | |
|-----------|-------------------|
| (1) 0 | (2) N |
| (3) N^2 | (4) $\frac{1}{N}$ |

Options :

92090624949. 1
92090624950. 2
92090624951. 3
92090624952. 4

Question Number : 39 Question Id : 9209066310 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If the length of arc of the curve $y = \frac{x^2}{2} - \frac{1}{4} \log_e x$ from $x = 1$ to $x = 2$, is $a + b \log_e 2$, then value of $a + 2b$, is

- | | |
|-------|-------|
| (1) 1 | (2) 2 |
| (3) 3 | (4) 8 |

Options :

92090624953. 1
92090624954. 2
92090624955. 3
92090624956. 4

Question Number : 39 Question Id : 9209066310 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि वक्र $y = \frac{x^2}{2} - \frac{1}{4} \log_e x$ को चाप की लम्बाई $x = 1$ से $x = 2$ तक $a + b \log_e 2$ है, तब $a + 2b$ का मान है-

- | | |
|-------|-------|
| (1) 1 | (2) 2 |
| (3) 3 | (4) 8 |

Options :

92090624953. 1
92090624954. 2
92090624955. 3
92090624956. 4

Question Number : 40 Question Id : 9209066311 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If N is any odd positive integer and $\delta_n = \int_0^N \binom{u}{n} \binom{N-u}{N-n} du$, then the value of

$$\sum_{n=0}^{N-1} N^{-1} (\delta_n + \delta_{N-n}) \text{ is}$$

- | | |
|-----------|-------------------|
| (1) 1 | (2) N |
| (3) N^2 | (4) $\frac{1}{N}$ |

Options :

92090624957. 1
92090624958. 2
92090624959. 3
92090624960. 4

Question Number : 40 Question Id : 9209066311 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि N कोई विषम धनात्मक पूर्णांक है तथा $\delta_n = \int_0^N \binom{u}{n} \binom{N-u}{N-n} du$, तब $\sum_{n=0}^{N-1} N^{-1} (\delta_n + \delta_{N-n})$ का मान है -

- | | |
|-----------|-------------------|
| (1) 1 | (2) N |
| (3) N^2 | (4) $\frac{1}{N}$ |

Options :

92090624957. 1
92090624958. 2
92090624959. 3
92090624960. 4

Question Number : 41 Question Id : 9209066312 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $\begin{bmatrix} a & -1 & b \\ c & 0 & e \\ d & 5 & f \end{bmatrix}$ is skew symmetric matrix, then minimum value of $(a + b + c)^2 + (d + e + f)^2$,
is

- (1) 1 (2) 4
(3) 3 (4) 8

Options :

92090624961. 1
92090624962. 2
92090624963. 3
92090624964. 4

Question Number : 41 Question Id : 9209066312 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $\begin{bmatrix} a & -1 & b \\ c & 0 & e \\ d & 5 & f \end{bmatrix}$ एक विषम सममित आव्यूह है, तब $(a + b + c)^2 + (d + e + f)^2$ का न्यूनतम मान है-

- (1) 1 (2) 4
(3) 3 (4) 8

Options :

92090624961. 1
92090624962. 2
92090624963. 3
92090624964. 4

Question Number : 42 Question Id : 9209066313 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sum of reciprocals of characteristic roots of the matrix $\begin{bmatrix} 1 & -1 & 2 \\ 2 & 3 & 4 \\ 1 & -2 & 0 \end{bmatrix}$ is

- (1) -2.9 (2) 2.9
(3) -1.1 (4) 1.1

Options :

92090624965. 1
92090624966. 2
92090624967. 3

Question Number : 42 Question Id : 9209066313 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

आव्यूह $\begin{bmatrix} 1 & -1 & 2 \\ 2 & 3 & 4 \\ 1 & -2 & 0 \end{bmatrix}$ के अभिलक्षणिक मूल के व्युत्क्रम का योग है-

- (1) -2.9 (2) 2.9
(3) -1.1 (4) 1.1

Options :

92090624965. 1
92090624966. 2
92090624967. 3
92090624968. 4

Question Number : 43 Question Id : 9209066314 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $A = \begin{bmatrix} -1 & -1 & 2 \\ 2 & 1 & 3 \\ 1 & -2 & 2 \end{bmatrix}$ and $A^3 = \alpha A^2 + \beta A + \gamma I$, then value of $\alpha - \beta - \gamma$, is

- (1) 3 (2) 5
(3) 24 (4) 36

Options :

92090624969. 1
92090624970. 2
92090624971. 3
92090624972. 4

Question Number : 43 Question Id : 9209066314 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $A = \begin{bmatrix} -1 & -1 & 2 \\ 2 & 1 & 3 \\ 1 & -2 & 2 \end{bmatrix}$ तथा $A^3 = \alpha A^2 + \beta A + \gamma I$ तब $\alpha - \beta - \gamma$ का मान है

- (1) 3 (2) 5
(3) 24 (4) 36

Options :

92090624969. 1
92090624970. 2
92090624971. 3
92090624972. 4

Question Number : 44 Question Id : 9209066315 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sum of squares of characteristic roots of the matrix $\begin{bmatrix} 1 & 1 & -100 \\ 0 & 1 & 400 \\ 0 & 0 & 1 \end{bmatrix}$, is

- (1) 1 (2) 3
(3) 6 (4) 9

Options :

92090624973. 1
92090624974. 2
92090624975. 3
92090624976. 4

Question Number : 44 Question Id : 9209066315 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

आव्यूह $\begin{bmatrix} 1 & 1 & -100 \\ 0 & 1 & 400 \\ 0 & 0 & 1 \end{bmatrix}$ के अभिलक्षणिक मूलों के वर्गों का योग है-

- (1) 1 (2) 3
(3) 6 (4) 9

Options :

92090624973. 1
92090624974. 2
92090624975. 3

Question Number : 45 Question Id : 9209066316 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Suppose A is a square matrix of order 4 and $|A| = 6$.

If $|2 \text{Adj}(3 \text{Adj}(4A))| = \lambda 6^a$, where λ is not divisible by 6, then the value of a is

- | | |
|--------|--------|
| (1) 1 | (2) 2 |
| (3) 20 | (4) 21 |

Options :

92090624977. 1
92090624978. 2
92090624979. 3
92090624980. 4

Question Number : 45 Question Id : 9209066316 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना A , 4 कोटि की वर्ग आव्यूह है तथा $|A| = 6$ यदि $|2 \text{Adj}(3 \text{Adj}(4A))| = \lambda 6^a$ जहाँ λ , 6 द्वारा विभाज्य नहीं हैं, तब a का मान है

- | | |
|--------|--------|
| (1) 1 | (2) 2 |
| (3) 20 | (4) 21 |

Options :

92090624977. 1
92090624978. 2
92090624979. 3
92090624980. 4

Question Number : 46 Question Id : 9209066317 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $\phi(x) = x + \sqrt{1+x^2}$. The solution of differential equation $\sqrt{1+x^2} dy + \sqrt{1+y^2} dx = 0$, is

- | | |
|-----------------------------|-----------------------------|
| (1) $\phi(x) \phi(y) = C$ | (2) $\phi(x) + \phi(y) = C$ |
| (3) $\phi(x) - \phi(y) = C$ | (4) $\phi(x)^{\phi(y)} = C$ |

Options :

92090624981. 1
92090624982. 2
92090624983. 3
92090624984. 4

Question Number : 46 Question Id : 9209066317 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $\phi(x) = x + \sqrt{1+x^2}$, अवकल समीकरण $\sqrt{1+x^2} dy + \sqrt{1+y^2} dx = 0$ का हल है

- | | |
|-----------------------------|-----------------------------|
| (1) $\phi(x) \phi(y) = C$ | (2) $\phi(x) + \phi(y) = C$ |
| (3) $\phi(x) - \phi(y) = C$ | (4) $\phi(x)^{\phi(y)} = C$ |

Options :

92090624981. 1
92090624982. 2
92090624983. 3
92090624984. 4

Question Number : 47 Question Id : 9209066318 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The complimentary function of differential equation

$$\frac{d^2y}{dx^2} + 3\frac{dy}{dx} + 2y = e^{2x} \text{ is}$$

- | | |
|-----------------------------|------------------------------|
| (1) $C_1e^{-x} + C_2e^{2x}$ | (2) $C_1e^{-x} + C_2e^{-2x}$ |
| (3) $C_1e^x + C_2e^{-2x}$ | (4) $C_1e^x + C_2e^{2x}$ |

Options :

92090624985. 1
92090624986. 2
92090624987. 3
92090624988. 4

Question Number : 47 Question Id : 9209066318 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अवकल समीकरण $\frac{d^2y}{dx^2} + 3\frac{dy}{dx} + 2y = e^{2x}$ का पूरक फलन है -

(1) $C_1e^{-x} + C_2e^{2x}$

(2) $C_1e^{-x} + C_2e^{-2x}$

(3) $C_1e^x + C_2e^{-2x}$

(4) $C_1e^x + C_2e^{2x}$

Options :

92090624985. 1

92090624986. 2

92090624987. 3

92090624988. 4

Question Number : 48 Question Id : 9209066319 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The solution of differential equation $\sqrt{1-2x^2}dy + \sqrt{1-2y^2}dx = 0$, is

(1) $\sqrt{1-2y^2} + \sqrt{1-2x^2} = C$

(2) $x\sqrt{1-y^2} + y\sqrt{1-x^2} = C$

(3) $x\sqrt{1-2y^2} + y\sqrt{1-2x^2} = C$

(4) $x\sqrt{1-2y^2} + y\sqrt{1-2x^2} = \sin^{-1}(xC)$

Options :

92090624989. 1

92090624990. 2

92090624991. 3

92090624992. 4

Question Number : 48 Question Id : 9209066319 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अवकल समीकरण $\sqrt{1-2x^2}dy + \sqrt{1-2y^2}dx = 0$ का हल है -

(1) $\sqrt{1-2y^2} + \sqrt{1-2x^2} = C$

(2) $x\sqrt{1-y^2} + y\sqrt{1-x^2} = C$

(3) $x\sqrt{1-2y^2} + y\sqrt{1-2x^2} = C$

(4) $x\sqrt{1-2y^2} + y\sqrt{1-2x^2} = \sin^{-1}(xC)$

Options :

92090624989. 1

92090624990. 2

92090624991. 3

92090624992. 4

Question Number : 49 Question Id : 9209066320 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The value of δ so that the differential equation $(3x^6 + 2y^3)dx + \delta xy^2 dy = 0$ will become exact, is

- | | |
|-------|--------|
| (1) 0 | (2) 1 |
| (3) 6 | (4) 10 |

Options :

- 92090624993. 1
- 92090624994. 2
- 92090624995. 3
- 92090624996. 4

Question Number : 49 Question Id : 9209066320 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

δ के किस मान के लिए अवकल समीकरण $(3x^6 + 2y^3)dx + \delta xy^2 dy = 0$ यथार्थ होगी -

- | | |
|-------|--------|
| (1) 0 | (2) 1 |
| (3) 6 | (4) 10 |

Options :

- 92090624993. 1
- 92090624994. 2
- 92090624995. 3
- 92090624996. 4

Question Number : 50 Question Id : 9209066321 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $D = \frac{d}{dx}$, then value of $\frac{1}{D+1} \left(\tan^{-1} x + \frac{1}{1+x^2} \right)$, is

- | | |
|-------------------------------|-------------------------------|
| (1) $\tan^{-1} x + e^x C$ | (2) $\tan^{-1} x + e^{-x} C$ |
| (3) $\tan^{-1} x + e^{-2x} C$ | (4) $\tan^{-1} x + e^{-3x} C$ |

Options :

- 92090624997. 1
- 92090624998. 2

92090624999. 3

92090625000. 4

Question Number : 50 Question Id : 9209066321 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $D = \frac{d}{dx}$, तब $\frac{1}{D+1} \left(\tan^{-1} x + \frac{1}{1+x^2} \right)$ का मान है -

(1) $\tan^{-1} x + e^x C$

(2) $\tan^{-1} x + e^{-x} C$

(3) $\tan^{-1} x + e^{-2x} C$

(4) $\tan^{-1} x + e^{-3x} C$

Options :

92090624997. 1

92090624998. 2

92090624999. 3

92090625000. 4

Question Number : 51 Question Id : 9209066322 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Two numbers are selected at random from the numbers 1, 2, 3, ..., 24 with replacement. If A and B represent two events that the numbers drawn are multiples of 4 and 5 respectively, then $P[A | B] + P[B | A]$ is equal to

(1) $1/4$

(2) $1/6$

(3) $11/12$

(4) $5/12$

Options :

92090625001. 1

92090625002. 2

92090625003. 3

92090625004. 4

Question Number : 51 Question Id : 9209066322 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

प्रतिस्थापन द्वारा संख्याओं 1, 2, 3, ..., 24 से यादृच्छिक रूप से दो संख्याओं को चुना जाता है। यदि A तथा B दो घटनाओं को इस प्रकार निरूपित करती हैं कि निकाली गई संख्याएँ क्रमशः 4 तथा 5 के गुणक हैं। तब $P[A|B] + P[B|A]$ बराबर है -

- | | |
|-------------|------------|
| (1) $1/4$ | (2) $1/6$ |
| (3) $11/12$ | (4) $5/12$ |

Options :

92090625001. 1
92090625002. 2
92090625003. 3
92090625004. 4

Question Number : 52 Question Id : 9209066323 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The weighted average of the first $2n$ natural numbers when every odd number is assigned the weight -1 and every even number is assigned the weight $+2$ is

- | | |
|--------------|-----------|
| (1) $2(n+1)$ | (2) $n+2$ |
| (3) $2n+1$ | (4) $n+1$ |

Options :

92090625005. 1
92090625006. 2
92090625007. 3
92090625008. 4

Question Number : 52 Question Id : 9209066323 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

प्रथम $2n$ प्राकृतिक संख्याओं का भारित औसत जब प्रत्येक विषम संख्या को -1 भार तथा प्रत्येक सम संख्या को $+2$ भार निर्दिष्ट किया जाता है, होगा-

- | | |
|--------------|-----------|
| (1) $2(n+1)$ | (2) $n+2$ |
| (3) $2n+1$ | (4) $n+1$ |

Options :

92090625005. 1
92090625006. 2
92090625007. 3
92090625008. 4

Question Number : 53 Question Id : 9209066324 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $P(A) = 0.3$, $P(\bar{B}) = 0.4$ and $P(A \cup B) = 0.8$ then value of $P(\bar{A} \cup \bar{B})$, is

- | | |
|---------|---------|
| (1) 0.3 | (2) 0.4 |
| (3) 0.2 | (4) 0.9 |

Options :

92090625009. 1
92090625010. 2
92090625011. 3
92090625012. 4

Question Number : 53 Question Id : 9209066324 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $P(A) = 0.3$, $P(\bar{B}) = 0.4$ तथा $P(A \cup B) = 0.8$, तब $P(\bar{A} \cup \bar{B})$ का मान है

- | | |
|---------|---------|
| (1) 0.3 | (2) 0.4 |
| (3) 0.2 | (4) 0.9 |

Options :

92090625009. 1
92090625010. 2
92090625011. 3
92090625012. 4

Question Number : 54 Question Id : 9209066325 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum
Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If 4 letters are to be placed randomly in 4 correspondingly addressed envelopes then the probability that all of them are not placed in right addressed envelopes, is

- | | |
|---------------------|---------------------|
| (1) $\frac{1}{24}$ | (2) $\frac{7}{24}$ |
| (3) $\frac{11}{24}$ | (4) $\frac{23}{24}$ |

Options :

92090625013. 1
92090625014. 2
92090625015. 3

92090625016. 4

Question Number : 54 Question Id : 9209066325 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि 4 पत्र 4 पते वाले लिफाफे के संगत यादृच्छित रूप से रखे जाते हैं, तब इनमें से सभी को सही पते वाले लिफाफे में नहीं रखने की प्रायिकता है -

(1) $\frac{1}{24}$

(2) $\frac{7}{24}$

(3) $\frac{11}{24}$

(4) $\frac{23}{24}$

Options :

92090625013. 1

92090625014. 2

92090625015. 3

92090625016. 4

Question Number : 55 Question Id : 9209066326 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If for some data $\beta_1 = \frac{3}{2}$, $\beta_2 = 3$ and $\sigma^2 = 1$, then value of $\frac{\mu_4}{\mu_3^2}$, is

(1) 2

(2) 6

(3) 4

(4) 5

Options :

92090625017. 1

92090625018. 2

92090625019. 3

92090625020. 4

Question Number : 55 Question Id : 9209066326 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि कुछ आकड़ों के लिए $\beta_1 = \frac{3}{2}$, $\beta_2 = 3$ तथा $\sigma^2 = 1$, तब $\frac{\mu_4}{\mu_3^2}$ का मान है-

- | | |
|-------|-------|
| (1) 2 | (2) 6 |
| (3) 4 | (4) 5 |

Options :

92090625017. 1
92090625018. 2
92090625019. 3
92090625020. 4

Question Number : 56 Question Id : 9209066327 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Three dice are thrown simultaneously. If two events A and B represents that sum of numbers drawn on three dice are multiples of 5 and 6 respectively then $P(\bar{A} \cup \bar{B})$ is equal to

- | | |
|-----------|---------------|
| (1) 1 | (2) 1/2 |
| (3) 5/216 | (4) 3883/3888 |

Options :

92090625021. 1
92090625022. 2
92090625023. 3
92090625024. 4

Question Number : 56 Question Id : 9209066327 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

तीन पाशे साथ-साथ फेंके जाते हैं। यदि दो घटनाएँ A तथा B दर्शाई गई है कि तीन पाशों पर निकाली गई संख्याओं का योग क्रमशः 5 तथा 6 के गुणक हैं तब $P(\bar{A} \cup \bar{B})$ बराबर है -

- | | |
|-----------|---------------|
| (1) 1 | (2) 1/2 |
| (3) 5/216 | (4) 3883/3888 |

Options :

92090625021. 1
92090625022. 2
92090625023. 3
92090625024. 4

Question Number : 57 Question Id : 9209066328 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Two groups of 100 sample units and 150 sample units are clubbed together. If mean and variance of first sample is 15 and 9 and for the whole group 15.6 and 13.44 respectively, then:

The mean of second group is

- | | |
|--------|--------|
| (1) 12 | (2) 16 |
| (3) 10 | (4) 28 |

Options :

- 92090625025. 1
- 92090625026. 2
- 92090625027. 3
- 92090625028. 4

Question Number : 57 Question Id : 9209066328 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

100 प्रतिदर्श इकाई तथा 150 प्रतिदर्श इकाई के दो समूहों को एक साथ मिला दिया जाता है। यदि प्रथम प्रतिदर्श का माध्य तथा प्रसरण 15 तथा 9 है तथा पूरे समूह के लिए क्रमशः 15.6 तथा 13.44 है तब:

द्वितीय समूह का माध्य है -

- | | |
|--------|--------|
| (1) 12 | (2) 16 |
| (3) 10 | (4) 28 |

Options :

- 92090625025. 1
- 92090625026. 2
- 92090625027. 3
- 92090625028. 4

Question Number : 58 Question Id : 9209066329 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A random variable X takes values $1, 2, \dots, n$ with equal probability. Then $\text{Var}(X)$ is

(1) $\frac{n^2 + 1}{12}$

(2) $\frac{n^2 - 1}{6}$

(3) $\frac{n^2 + 1}{6}$

(4) $\frac{n^2 - 1}{12}$

Options :

92090625029. 1

92090625030. 2

92090625031. 3

92090625032. 4

Question Number : 58 Question Id : 9209066329 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

एक यादृच्छिक जर X , समान प्रायिकता के साथ $1, 2, \dots, n$ मान लेता है। X का प्रसरण है।

द्वितीय समूह की इकाई का प्रसरण है -

(1) $\frac{n^2 + 1}{12}$

(2) $\frac{n^2 - 1}{6}$

(3) $\frac{n^2 + 1}{6}$

(4) $\frac{n^2 - 1}{12}$

Options :

92090625029. 1

92090625030. 2

92090625031. 3

92090625032. 4

Question Number : 59 Question Id : 9209066330 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a random variable X assumes values $0, 1$ and 2 with equal probabilities, then the moment generating function of the random variable X about origin is

(1) $\frac{1}{3}(1 + e^t + e^{-2t})$

(2) $\frac{1}{3}(1 + e^t + e^{2t})$

(3) $\frac{1}{3}(3 + e^t + e^{2t})$

(4) $\frac{1}{3}(e^t + e^{2t} + e^{3t})$

Options :

92090625033. 1

92090625034. 2

92090625035. 3

92090625036. 4

Question Number : 59 Question Id : 9209066330 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि यादृच्छिक चर X 0, 1 तथा 2 मान तथा समान प्रायिकता मानता है, तब मूलबिन्दु के चारों तरफ यादृच्छिक चर का आघूर्ण जनक फलन है -

(1) $\frac{1}{3}(1 + e^t + e^{-2t})$

(2) $\frac{1}{3}(1 + e^t + e^{2t})$

(3) $\frac{1}{3}(3 + e^t + e^{2t})$

(4) $\frac{1}{3}(e^t + e^{2t} + e^{3t})$

Options :

92090625033. 1

92090625034. 2

92090625035. 3

92090625036. 4

Question Number : 60 Question Id : 9209066331 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The moment generating function of random variable X is given by

$$M_X(t) = \frac{1}{(9 - 8e^t)^{17}}, -\infty < t < \infty$$

Then $\frac{\text{Var}(X)}{E(X)}$, is

(1) 8

(2) 9

(3) 17

(4) 136

Options :

92090625037. 1

92090625038. 2

92090625039. 3

92090625040. 4

Question Number : 60 Question Id : 9209066331 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चर X का आघूर्णजनक फलन दिया गया है $M_X(t) = \frac{1}{(9 - 8e^t)^{17}}, -\infty < t < \infty$

तब $\frac{Var(X)}{E(X)}$ है

- | | |
|--------|---------|
| (1) 8 | (2) 9 |
| (3) 17 | (4) 136 |

Options :

92090625037. 1
92090625038. 2
92090625039. 3
92090625040. 4

Question Number : 61 Question Id : 9209066332 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $X \sim B\left(n = 2, p = \frac{1}{2}\right)$, $Y \sim B\left(n = 3, p = \frac{1}{3}\right)$ and X, Y are independently distributed then $P(2X + 3Y = 13)$, is

- | | |
|----------------------|---------------------|
| (1) $\frac{1}{108}$ | (2) $\frac{5}{108}$ |
| (3) $\frac{25}{108}$ | (4) $\frac{1}{9}$ |

Options :

92090625041. 1
92090625042. 2
92090625043. 3
92090625044. 4

Question Number : 61 Question Id : 9209066332 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $X \sim B\left(n = 2, p = \frac{1}{2}\right)$, $Y \sim B\left(n = 3, p = \frac{1}{3}\right)$ तथा X, Y स्वतन्त्र रूप से वितरित है तब $P(2X + 3Y = 13)$ है -

(1) $\frac{1}{108}$

(2) $\frac{5}{108}$

(3) $\frac{25}{108}$

(4) $\frac{1}{9}$

Options :

92090625041. 1

92090625042. 2

92090625043. 3

92090625044. 4

Question Number : 62 Question Id : 9209066333 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The moment generating function of random variable X is given by

$$M_X(t) = \frac{2}{9} + \frac{1}{9}e^{-t} + \frac{1}{9}e^{-2t} + \frac{2}{9}e^t + \frac{1}{3}e^{2t}, -\infty < t < \infty$$

Then $P(X \geq 0)$, is

(1) $\frac{1}{9}$

(2) $\frac{2}{9}$

(3) $\frac{5}{9}$

(4) $\frac{7}{9}$

Options :

92090625045. 1

92090625046. 2

92090625047. 3

92090625048. 4

Question Number : 62 Question Id : 9209066333 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चर का आघूर्णजनक फलन दिया गया है -

$$M_X(t) = \frac{2}{9} + \frac{1}{9}e^{-t} + \frac{1}{9}e^{-2t} + \frac{2}{9}e^t + \frac{1}{3}e^{2t}, -\infty < t < \infty$$

तब $P(X \geq 0)$ है

- | | |
|-------------------|-------------------|
| (1) $\frac{1}{9}$ | (2) $\frac{2}{9}$ |
| (3) $\frac{5}{9}$ | (4) $\frac{7}{9}$ |

Options :

92090625045. 1
92090625046. 2
92090625047. 3
92090625048. 4

Question Number : 63 Question Id : 9209066334 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In a sequence of Bernoulli $\left(\frac{1}{2}\right)$ trials, the probability of getting a third success at trial number seven, is

- | | |
|----------------------|---------------------|
| (1) $\frac{15}{128}$ | (2) $\frac{1}{27}$ |
| (3) $\frac{11}{128}$ | (4) $\frac{5}{128}$ |

Options :

92090625049. 1
92090625050. 2
92090625051. 3
92090625052. 4

Question Number : 63 Question Id : 9209066334 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

बर्नूली $\left(\frac{1}{2}\right)$ जाँच के अनुक्रम में, जाँच संख्या 7 पर तीसरी सफलता प्राप्त करने की प्रायिकता है -

(1) $\frac{15}{128}$

(2) $\frac{1}{27}$

(3) $\frac{11}{128}$

(4) $\frac{5}{128}$

Options :

92090625049. 1

92090625050. 2

92090625051. 3

92090625052. 4

Question Number : 64 Question Id : 9209066335 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The moment generating function of random variable X is given by

$$M_X(t) = \frac{1}{(9 - 8e^t)^{17}}, -\infty < t < \infty,$$

Then $E(X)$, is

(1) 8

(2) 9

(3) 17

(4) 136

Options :

92090625053. 1

92090625054. 2

92090625055. 3

92090625056. 4

Question Number : 64 Question Id : 9209066335 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चर X का आघूर्णजनक फलन दिया गया है $M_X(t) = \frac{1}{(9 - 8e^t)^{17}}, -\infty < t < \infty$ तब, $E(X)$ है-

(1) 8

(2) 9

(3) 17

(4) 136

Options :

92090625053. 1

92090625054. 2

92090625055. 3

92090625056. 4

Question Number : 65 Question Id : 9209066336 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If a random variable X assumes values -1 and 1 with equal probabilities and $M_X(t)$ is its moment generating function then

$$\lim_{t \rightarrow 0} \frac{M_X(\sqrt{t}) - 1 - \frac{t}{2}}{t^2} \text{ is}$$

(1) $1/2$

(2) 2

(3) $1/24$

(4) 0

Options :

92090625057. 1

92090625058. 2

92090625059. 3

92090625060. 4

Question Number : 65 Question Id : 9209066336 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि कोई यादृच्छिक चर X समान प्रायिकता तथा -1 व 1 मान मानता है तथा $M_X(t)$ उसका आघूर्णजनक फलन है,

$$\text{तब } \lim_{t \rightarrow 0} \frac{M_X(\sqrt{t}) - 1 - \frac{t}{2}}{t^2} \text{ है}$$

(1) $1/2$

(2) 2

(3) $1/24$

(4) 0

Options :

92090625057. 1

92090625058. 2

92090625059. 3

92090625060. 4

Question Number : 66 Question Id : 9209066337 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let (X, Y) be random variables with joint probability mass function

$$P[X = x, Y = y] = \binom{x}{y} \left(\frac{1}{4}\right)^x, y = 0, 1, 2, \dots, x; x = 1, 2, \dots. \text{ Then } \text{Var}(Y) \text{ is equal to}$$

- | | |
|-------|-------|
| (1) 1 | (2) 2 |
| (3) 3 | (4) 4 |

Options :

92090625061. 1
92090625062. 2
92090625063. 3
92090625064. 4

Question Number : 66 Question Id : 9209066337 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना (X, Y) यादृच्छिक चर है तथा संयुक्त प्रायिकता द्रव्यमान फलन

$$P[X = x, Y = y] = \binom{x}{y} \left(\frac{1}{4}\right)^x, y = 0, 1, 2, \dots, x; x = 1, 2, \dots. \text{ तब } \text{Var}(Y) \text{ बराबर है-}$$

- | | |
|-------|-------|
| (1) 1 | (2) 2 |
| (3) 3 | (4) 4 |

Options :

92090625061. 1
92090625062. 2
92090625063. 3
92090625064. 4

Question Number : 67 Question Id : 9209066338 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If X and Y are i.i.d. $\chi^2_{(2)}$ variates, then the moment generating function of $2X - 3Y$, is

- | | |
|--------------------------------|--------------------------------|
| (1) $\frac{1}{1 + 2t - 24t^2}$ | (2) $\frac{1}{1 + 2t + 24t^2}$ |
| (3) $\frac{1}{1 - 8t + 18t^2}$ | (4) $\frac{1}{1 - 2t - 24t^2}$ |

Options :

92090625065. 1
92090625066. 2
92090625067. 3

Question Number : 67 Question Id : 9209066338 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि X तथा Y i.i.d. $\chi^2_{(2)}$ विचर है, तब $2X - 3Y$ का आघूर्ण जनक फलन है-

(1) $\frac{1}{1 + 2t - 24t^2}$

(2) $\frac{1}{1 + 2t + 24t^2}$

(3) $\frac{1}{1 - 8t + 18t^2}$

(4) $\frac{1}{1 - 2t - 24t^2}$

Options :

92090625065. 1

92090625066. 2

92090625067. 3

92090625068. 4

Question Number : 68 Question Id : 9209066339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The distribution of difference of two independent Chi-Square (2) variates is

(1) Triangular distribution

(2) Beta Type I distribution

(3) Beta Type II distribution

(4) Laplace distribution

Options :

92090625069. 1

92090625070. 2

92090625071. 3

92090625072. 4

Question Number : 68 Question Id : 9209066339 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो स्वतन्त्र काई-वर्ग (2) विचर के अन्तर का बंटन है -

(1) त्रिभुजीय बंटन

(2) बीटा प्रकार I बंटन

(3) बीटा प्रकार II बंटन

(4) लाप्लास बंटन

Options :

92090625069. 1
92090625070. 2
92090625071. 3
92090625072. 4

Question Number : 69 Question Id : 9209066340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The mode of $F(4, 8)$ distribution, is

- | | |
|---------|-----------|
| (1) 0.4 | (2) 0.6 |
| (3) 0.8 | (4) 0.125 |

Options :

92090625073. 1
92090625074. 2
92090625075. 3
92090625076. 4

Question Number : 69 Question Id : 9209066340 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

$F(4, 8)$ बंटन का बहुलक है

- | | |
|---------|-----------|
| (1) 0.4 | (2) 0.6 |
| (3) 0.8 | (4) 0.125 |

Options :

92090625073. 1
92090625074. 2
92090625075. 3
92090625076. 4

Question Number : 70 Question Id : 9209066341 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $X \sim B\left(n=2, p=\frac{1}{2}\right)$, $Y \sim B\left(n=3, p=\frac{1}{3}\right)$ and X, Y are independently distributed then $P(X-Y=-1)$, is

- | | |
|----------------------|---------------------|
| (1) $\frac{19}{108}$ | (2) $\frac{5}{108}$ |
| (3) $\frac{25}{108}$ | (4) $\frac{1}{9}$ |

Options :

92090625077. 1
 92090625078. 2
 92090625079. 3
 92090625080. 4

Question Number : 70 Question Id : 9209066341 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $X \sim B\left(n=2, p=\frac{1}{2}\right)$, $Y \sim B\left(n=3, p=\frac{1}{3}\right)$ तथा X, Y स्वतन्त्र रूप से वितरित है, तब $P(X-Y=-1)$ है -

- | | |
|----------------------|---------------------|
| (1) $\frac{19}{108}$ | (2) $\frac{5}{108}$ |
| (3) $\frac{25}{108}$ | (4) $\frac{1}{9}$ |

Options :

92090625077. 1
 92090625078. 2
 92090625079. 3
 92090625080. 4

Question Number : 71 Question Id : 9209066342 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If X and Y are i.i.d. $N(0, 1)$ variates, then moment generating function of $2X^2 - 3Y^2$, is

- | | |
|--|---|
| (1) $\frac{1}{\sqrt{1+2t-24t^2}}$ | (2) $\frac{e^{t^2}}{\sqrt{1+2t-24t^2}}$ |
| (3) $\frac{e^{-t^2}}{\sqrt{1+2t-24t^2}}$ | (4) $\frac{e^{-5t^2}}{\sqrt{1+2t-24t^2}}$ |

Options :

- 92090625081. 1
- 92090625082. 2
- 92090625083. 3
- 92090625084. 4

Question Number : 71 Question Id : 9209066342 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि X तथा Y i.i.d. $N(0, 1)$ विचर है, तब $2X^2 - 3Y^2$ का आघूर्णजनक फलन है -

- | | |
|--|---|
| (1) $\frac{1}{\sqrt{1+2t-24t^2}}$ | (2) $\frac{e^{t^2}}{\sqrt{1+2t-24t^2}}$ |
| (3) $\frac{e^{-t^2}}{\sqrt{1+2t-24t^2}}$ | (4) $\frac{e^{-5t^2}}{\sqrt{1+2t-24t^2}}$ |

Options :

- 92090625081. 1
- 92090625082. 2
- 92090625083. 3
- 92090625084. 4

Question Number : 72 Question Id : 9209066343 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $X \sim N(\mu = 1, \sigma^2 = 2)$ and $Y \sim N(\mu = 2, \sigma^2 = 1)$ and X and Y are independently distributed then distribution of $2X - 3Y$, is

- | | |
|----------------------------------|---------------------------------|
| (1) $N(\mu = -4, \sigma^2 = 17)$ | (2) $N(\mu = -4, \sigma = 17)$ |
| (3) $N(\mu = 4, \sigma^2 = 16)$ | (4) $N(\mu = -4, \sigma^2 = 1)$ |

Options :

- 92090625085. 1
- 92090625086. 2
- 92090625087. 3
- 92090625088. 4

Question Number : 72 Question Id : 9209066343 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $X \sim N(\mu = 1, \sigma^2 = 2)$ तथा $Y \sim N(\mu = 2, \sigma^2 = 1)$ तथा X व Y स्वतन्त्र रूप से वितरित हैं तब $2X - 3Y$ का बंटन है -

- (1) $N(\mu = -4, \sigma^2 = 17)$ (2) $N(\mu = -4, \sigma = 17)$
 (3) $N(\mu = 4, \sigma^2 = 16)$ (4) $N(\mu = -4, \sigma^2 = 1)$

Options :

92090625085. 1
 92090625086. 2
 92090625087. 3
 92090625088. 4

Question Number : 73 Question Id : 9209066344 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \dots, X_m$ be a random sample from normal population $N(\mu_1, \sigma^2)$ and let $Y_1, Y_2, \dots, Y_n$ be another independent random sample (independent of the X_i 's also) from normal population $N(\mu_2, \sigma^2)$. If,

$$S_1^2 = \frac{1}{m-1} \sum_{r=1}^m (X_r - \bar{X})^2, S_2^2 = \frac{1}{n-1} \sum_{r=1}^n (Y_r - \bar{Y})^2,$$

$$S_p^2 = \frac{(m-1)S_1^2 + (n-1)S_2^2}{m+n-2} \text{ and } \sigma^2 \text{ is}$$

unknown, then the distribution of $T = \frac{\bar{X} - \bar{Y}}{\sqrt{S_p^2 \left(\frac{1}{m} + \frac{1}{n} \right)}}$ under $H_0 : \mu_1 = \mu_2$ is

- (1) $B_2\left(\frac{1}{2}, \frac{n-2}{2}\right)$ (2) $N(0, 1)$
 (3) $t_{(m+n-2)}$ (4) $t_{(m+n-1)}$

Options :

92090625089. 1
 92090625090. 2
 92090625091. 3
 92090625092. 4

Question Number : 73 Question Id : 9209066344 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \dots, X_m$ प्रसामान्य समष्टि $N(\mu_1, \sigma^2)$ से एक यादृच्छिक नमूना है तथा माना $Y_1, Y_2, \dots, Y_n$ प्रसामान्य समष्टि $N(\mu_2, \sigma^2)$ से दूसरा स्वतंत्र यादृच्छिक नमूना (X_i 's से स्वतंत्र) है। यदि

$$S_1^2 = \frac{1}{m-1} \sum_{r=1}^m (X_r - \bar{X})^2, S_2^2 = \frac{1}{n-1} \sum_{r=1}^n (Y_r - \bar{Y})^2,$$

$$S_p^2 = \frac{(m-1)S_1^2 + (n-1)S_2^2}{m+n-2} \text{ तथा } \sigma^2 \text{ अज्ञात है, तब } H_0: \mu_1 = \mu_2 \text{ के अधीन } T = \frac{\bar{X} - \bar{Y}}{\sqrt{S_p^2 \left(\frac{1}{m} + \frac{1}{n} \right)}} \text{ का}$$

बंटन है

$$(1) \quad B_2 \left(\frac{1}{2}, \frac{n-2}{2} \right)$$

$$(2) \quad N(0, 1)$$

$$(3) \quad t_{(m+n-2)}$$

$$(4) \quad t_{(m+n-1)}$$

Options :

92090625089. 1

92090625090. 2

92090625091. 3

92090625092. 4

Question Number : 74 Question Id : 9209066345 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If X and Y are i.i.d. Laplace (1, 1) variates, then moment generating function of $2X - Y$, is

$$(1) \quad \frac{e^t}{1 - 5t^2 + 4t^4}$$

$$(2) \quad \frac{e^{-t}}{1 - 5t^2 + 4t^4}$$

$$(3) \quad \frac{1}{1 - 2t - 8t^2}$$

$$(4) \quad \frac{e^{2t}}{1 + 2t - 8t^2}$$

Options :

92090625093. 1

92090625094. 2

92090625095. 3

92090625096. 4

Question Number : 74 Question Id : 9209066345 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि X तथा Y i.i.d. लाप्लास $(1, 1)$ विचर है, तब $2X - Y$ का आघूर्णजनक फलन है -

(1) $\frac{e^t}{1 - 5t^2 + 4t^4}$

(2) $\frac{e^{-t}}{1 - 5t^2 + 4t^4}$

(3) $\frac{1}{1 - 2t - 8t^2}$

(4) $\frac{e^{2t}}{1 + 2t - 8t^2}$

Options :

92090625093. 1

92090625094. 2

92090625095. 3

92090625096. 4

Question Number : 75 Question Id : 9209066346 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The joint probability mass function of two random variables X and Y is given by

$$\begin{bmatrix} x/y & 1 & 2 & 3 \\ 0 & p & 2p & 3p \\ 1 & 2p & 4p & 5p \\ 2 & 3p & 5p & 7p \end{bmatrix} \text{ where } p = \frac{1}{32}$$

The value of $P[X = 1 | Y = 2] + P[Y = 2 | X = 1]$ is

(1) $\frac{8}{11}$

(2) $\frac{2}{11}$

(3) $\frac{1}{21}$

(4) $\frac{19}{22}$

Options :

92090625097. 1

92090625098. 2

92090625099. 3

92090625100. 4

Question Number : 75 Question Id : 9209066346 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y के संयुक्त प्रायिकता द्रव्यमान-फलन को दिया गया है

$$\begin{bmatrix} x/y & 1 & 2 & 3 \\ 0 & p & 2p & 3p \\ 1 & 2p & 4p & 5p \\ 2 & 3p & 5p & 7p \end{bmatrix} \text{ जहाँ } p = \frac{1}{32} \text{ तब } P[X=1 | Y=2] + P[Y=2 | X=1] \text{ का मान है -}$$

- (1) $\frac{8}{11}$ (2) $\frac{2}{11}$
 (3) $\frac{1}{21}$ (4) $\frac{19}{22}$

Options :

92090625097. 1
 92090625098. 2
 92090625099. 3
 92090625100. 4

Question Number : 76 Question Id : 9209066347 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The joint probability density function of two random variables X and Y is given as :

$$f(x, y) = \begin{cases} \lambda xy^2, & 0 < 2x < 3y < 6, \\ 0, & \text{otherwise} \end{cases}$$

Then value of λ is

- (1) $\frac{1}{9}$ (2) $\frac{2}{9}$
 (3) $\frac{5}{36}$ (4) $\frac{1}{18}$

Options :

92090625101. 1
 92090625102. 2
 92090625103. 3
 92090625104. 4

Question Number : 76 Question Id : 9209066347 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता घनत्व फलन इस प्रकार दिया है:

$$f(x, y) = \begin{cases} \lambda xy^2, & 0 < 2x < 3y < 6, \\ 0, & \text{अन्यथा} \end{cases}$$

तब, λ का मान है

(1) $\frac{1}{9}$

(2) $\frac{2}{9}$

(3) $\frac{5}{36}$

(4) $\frac{1}{18}$

Options :

92090625101. 1

92090625102. 2

92090625103. 3

92090625104. 4

Question Number : 77 Question Id : 9209066348 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The joint probability density function of two random variables X and Y is given by :

$$f(x, y) = \begin{cases} \frac{1}{2x^2y}, & 1 < x < \infty \text{ and } \frac{1}{x} < y < x, \\ 0, & \text{otherwise} \end{cases}$$

Then value of $P\left(Y > \frac{5}{4}\right)$, is

(1) $\frac{1}{2}$

(2) $\frac{1}{7}$

(3) $\frac{2}{5}$

(4) $\frac{1}{9}$

Options :

92090625105. 1

92090625106. 2

92090625107. 3

92090625108. 4

Question Number : 77 Question Id : 9209066348 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता घनत्व फलन इस प्रकार दिया है:

$$f(x, y) = \begin{cases} \frac{1}{2x^2y}, & 1 < x < \infty \text{ तथा } \frac{1}{x} < y < x, \\ 0, & \text{अन्यथा} \end{cases}$$

तब, $P\left(Y > \frac{5}{4}\right)$ का मान है

(1) $\frac{1}{2}$

(2) $\frac{1}{7}$

(3) $\frac{2}{5}$

(4) $\frac{1}{9}$

Options :

92090625105. 1

92090625106. 2

92090625107. 3

92090625108. 4

Question Number : 78 Question Id : 9209066349 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let the WLLN holds true for the sequence of random variables $X_1, X_2, \dots$. Let

$S_n = X_1 + X_2 + \dots + X_n$ and $Y_n = \frac{1}{n}(S_n - E(S_n))$ for $n \geq 1$. If $\lim_{n \rightarrow \infty} E\left[\frac{Y_n^2}{1 + Y_n^2}\right] = \lambda$, then the

value of λ is

(1) 0

(2) 1

(3) -1

(4) ∞

Options :

92090625109. 1

92090625110. 2

92090625111. 3

92090625112. 4

Question Number : 78 Question Id : 9209066349 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना यादृच्छिक चरों $X_1, X_2, \dots$ के अनुक्रम के लिए WLLN पर्याप्त होता है। माना $S_n = X_1 + X_2 + \dots + X_n$ तथा

$$Y_n = \frac{1}{n}(S_n - E(S_n)); n \geq 1 \text{ यदि } \lim_{n \rightarrow \infty} E \left[\frac{Y_n^2}{1 + Y_n^2} \right] = \lambda, \text{ तब } \lambda \text{ का मान है-}$$

- | | |
|--------|--------------|
| (1) 0 | (2) 1 |
| (3) -1 | (4) ∞ |

Options :

92090625109. 1
92090625110. 2
92090625111. 3
92090625112. 4

Question Number : 79 Question Id : 9209066350 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The joint probability density function of two random variables X and Y is given by

$$f(x, y) = \begin{cases} \frac{1}{2x^{2y}}, & 1 < x < \infty \text{ and } \frac{1}{x} < y < x \\ 0 & \text{otherwise} \end{cases}$$

Then the value of $P\left[Y < \frac{1}{2}\right]$ is

- | | |
|-------------------|-------------------|
| (1) $\frac{1}{2}$ | (2) $\frac{1}{4}$ |
| (3) $\frac{2}{5}$ | (4) $\frac{1}{9}$ |

Options :

92090625113. 1
92090625114. 2
92090625115. 3
92090625116. 4

Question Number : 79 Question Id : 9209066350 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

दो यादृच्छिक चरों X तथा Y का संयुक्त प्रायिकता घनत्व फलन इस प्रकार दिया है:

$$f(x, y) = \begin{cases} \frac{1}{2x^{2y}}, & 1 < x < \infty \text{ तथा } \frac{1}{x} < y < x \\ 0 & \text{अन्यथा} \end{cases}$$

तब, $P\left[Y < \frac{1}{2}\right]$ का मान है

- | | |
|-------------------|-------------------|
| (1) $\frac{1}{2}$ | (2) $\frac{1}{4}$ |
| (3) $\frac{2}{5}$ | (4) $\frac{1}{9}$ |

Options :

92090625113. 1

92090625114. 2

92090625115. 3

92090625116. 4

Question Number : 80 Question Id : 9209066351 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The joint distribution of two random variables X and Y is $f(x, y) = \frac{x}{3} e^{-xy}$, $1 < x < 4$ and $0 < y < \infty$. Then $E(Y)$ is

- | | |
|----------------------------|----------------------------|
| (1) $\frac{\log_e 2}{3}$ | (2) $\frac{2 \log_e 2}{3}$ |
| (3) $\frac{4 \log_e 2}{3}$ | (4) $\frac{2 \log_e 9}{3}$ |

Options :

92090625117. 1

92090625118. 2

92090625119. 3

92090625120. 4

Question Number : 80 Question Id : 9209066351 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना दो यादृच्छिक चरों X तथा Y का संयुक्त बंटन है -

$$f(x, y) = \frac{x}{3} e^{-xy}, 1 < x < 4, 0 < y < \infty$$

तब $E(Y)$ है

- | | |
|----------------------------|----------------------------|
| (1) $\frac{\log_e 2}{3}$ | (2) $\frac{2 \log_e 2}{3}$ |
| (3) $\frac{4 \log_e 2}{3}$ | (4) $\frac{2 \log_e 9}{3}$ |

Options :

92090625117. 1

92090625118. 2

92090625119. 3

92090625120. 4

Question Number : 81 Question Id : 9209066352 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \dots$ be a sequence of random variables and $Y_n = \frac{1}{n}(S_n - E(S_n))$, where

$S_n = X_1 + X_2 + \dots + X_n$. Then for WLLN to hold true, the condition $\lim_{n \rightarrow \infty} E\left(\frac{Y_n^2}{1 + Y_n^2}\right) \rightarrow \lambda$, is

- | | |
|--|---|
| (1) Necessary for $\lambda = 0$ | (2) Sufficient for $\lambda = 0$ |
| (3) Necessary and sufficient for $\lambda = 0$ | (4) Necessary and sufficient for $\lambda = \infty$ |

Options :

92090625121. 1

92090625122. 2

92090625123. 3

92090625124. 4

Question Number : 81 Question Id : 9209066352 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \dots$ यादृच्छिक चरों की अनुक्रम है तथा $Y_n = \frac{1}{n}(S_n - E(S_n))$, जहाँ $S_n = X_1 + X_2 + \dots + X_n$

तब WLLN के पर्याप्त होने के लिए, प्रतिबंध $\lim_{n \rightarrow \infty} E\left(\frac{Y_n^2}{1 + Y_n^2}\right) \rightarrow \lambda$ है।

- | | |
|--|---|
| (1) $\lambda = 0$ के लिए आवश्यक | (2) $\lambda = 0$ के लिए पर्याप्त |
| (3) $\lambda = 0$ के लिए आवश्यक तथा पर्याप्त | (4) $\lambda = \infty$ के लिए आवश्यक तथा पर्याप्त |

Options :

- 92090625121. 1
- 92090625122. 2
- 92090625123. 3
- 92090625124. 4

Question Number : 82 Question Id : 9209066353 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For a sequence of random variable $X_1, X_2, \dots$,

$\text{var}(X_i) = 1$ and for $i \neq j$,

$$\text{cov}(X_i X_j) = \begin{cases} \beta & |i - j| = 1, 2, 3 \\ 0 & \text{otherwise} \end{cases}$$

The sequence follows the WLLN for

- | | |
|-----------------|-------------------------------------|
| (1) $\beta > 1$ | (2) $\beta > 2$ |
| (3) $\beta > 3$ | (4) for any finite value of β |

Options :

- 92090625125. 1
- 92090625126. 2
- 92090625127. 3
- 92090625128. 4

Question Number : 82 Question Id : 9209066353 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यादृच्छिक चरों $X_1, X_2, \dots$ के अनुक्रम के लिए

$\text{var}(X_i) = 1$ और $i \neq j$ के लिए

$$\text{cov}(X_i X_j) = \begin{cases} \beta & |i - j| = 1, 2, 3 \\ 0, & \text{अन्यथा} \end{cases}$$

तब इनमें से किसके लिए इस अनुक्रम पर WLLN लागू होगा -

- | | |
|-----------------|---|
| (1) $\beta > 1$ | (2) $\beta > 2$ |
| (3) $\beta > 3$ | (4) β के किसी भी सीमित मान के लिए |

Options :

- 92090625125. 1
- 92090625126. 2
- 92090625127. 3

Question Number : 83 Question Id : 9209066354 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \dots, X_n$ be a random sample from population with probability density function

$f(x, \theta) = \frac{2(\theta - x)}{\theta^2}$, $0 < x < \theta$ and $\theta > 0$. The estimate of θ by method of moments, is

- | | |
|----------------|----------------|
| (1) $\bar{X}$ | (2) $2\bar{X}$ |
| (3) $3\bar{X}$ | (4) $4\bar{X}$ |

Options :

92090625129. 1
92090625130. 2
92090625131. 3
92090625132. 4

Question Number : 83 Question Id : 9209066354 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि $X_1, X_2, \dots, X_n$ समष्टि से एक यादृच्छिक प्रतिदर्श है जिसका $f(x, \theta) = \frac{2(\theta - x)}{\theta^2}$, $0 < x < \theta$ तथा $\theta > 0$ प्रायिकता घनत्व फलन है। तब आघूर्ण विधि द्वारा θ का आकल है-

- | | |
|----------------|----------------|
| (1) $\bar{X}$ | (2) $2\bar{X}$ |
| (3) $3\bar{X}$ | (4) $4\bar{X}$ |

Options :

92090625129. 1
92090625130. 2
92090625131. 3
92090625132. 4

Question Number : 84 Question Id : 9209066355 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If T_1 and T_2 are two distinct unbiased estimators of $\gamma(\theta)$ and $T = E(T_1 | T_2)$, then

- | | |
|----------------------------|----------------------------|
| (1) $Var(T) = Var(T_1)$ | (2) $Var(T) \leq Var(T_1)$ |
| (3) $Var(T) \geq Var(T_2)$ | (4) $Var(T) = Var(T_2)$ |

Options :

- 92090625133. 1
- 92090625134. 2
- 92090625135. 3
- 92090625136. 4

Question Number : 84 Question Id : 9209066355 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि T_1 तथा T_2 , $\gamma(\theta)$ के दो पृथक अनभिन्न आकलक हैं तथा $T = E(T_1 | T_2)$, तब

- | | |
|----------------------------|----------------------------|
| (1) $Var(T) = Var(T_1)$ | (2) $Var(T) \leq Var(T_1)$ |
| (3) $Var(T) \geq Var(T_2)$ | (4) $Var(T) = Var(T_2)$ |

Options :

- 92090625133. 1
- 92090625134. 2
- 92090625135. 3
- 92090625136. 4

Question Number : 85 Question Id : 9209066356 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \dots, X_n$ be a random sample from population $U(0, \theta)$, $\theta > 0$. Then maximum likelihood estimate of θ , is

- | | |
|-------------------------|-----------------------------|
| (1) $\frac{X_{(n)}}{2}$ | (2) $\frac{X_{(n)}}{2} - 1$ |
| (3) $X_{(n)}$ | (4) $X_{(1)}$ |

Options :

- 92090625137. 1
- 92090625138. 2
- 92090625139. 3
- 92090625140. 4

Question Number : 85 Question Id : 9209066356 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \dots, X_n$ समष्टि $U(0, \theta)$, $\theta > 0$ से यादृच्छिक नमूना है। तब θ का उच्चतम संभावित आकल है-

- | | |
|-------------------------|-----------------------------|
| (1) $\frac{X_{(n)}}{2}$ | (2) $\frac{X_{(n)}}{2} - 1$ |
| (3) $X_{(n)}$ | (4) $X_{(1)}$ |

Options :

92090625137. 1
92090625138. 2
92090625139. 3
92090625140. 4

Question Number : 86 Question Id : 9209066357 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Suppose $X_1, X_2, \dots, X_{100}$ is a random sample from $N(\mu = \theta, \sigma^2 = 100)$ and Z is a standard normal variate such that $P[Z > z_{\alpha/2}] = \frac{\alpha}{2}$. Then 100 $(1 - \alpha)\%$ confidence interval for θ is

- | | |
|---|---|
| (1) $\left(\bar{X} - \frac{Z_{\alpha/2}}{10}, \bar{X} + \frac{Z_{\alpha/2}}{10} \right)$ | (2) $\left(\bar{X} - Z_{\alpha/2}, \bar{X} + Z_{\alpha/2} \right)$ |
| (3) $\left[\bar{X} - \frac{1}{2} Z_{\alpha/2}, \bar{X} + \frac{1}{2} Z_{\alpha/2} \right]$ | (4) $\left(\bar{X} - \frac{Z_{\alpha/2}}{100}, \bar{X} + \frac{Z_{\alpha/2}}{100} \right)$ |

Options :

92090625141. 1
92090625142. 2
92090625143. 3
92090625144. 4

Question Number : 86 Question Id : 9209066357 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \dots, X_{100}$ $N(\mu = \theta, \sigma^2 = 100)$ से एक यादृच्छिक नमूना है तथा Z एक मानक प्रसामान्य विचर इस प्रकार है कि $P[Z > z_{\alpha/2}] = \frac{\alpha}{2}$, तब θ के लिए 100 $(1 - \alpha)\%$ विश्वास्यता अंतराल है -

- | | |
|---|---|
| (1) $\left(\bar{X} - \frac{Z_{\alpha/2}}{10}, \bar{X} + \frac{Z_{\alpha/2}}{10} \right)$ | (2) $\left(\bar{X} - Z_{\alpha/2}, \bar{X} + Z_{\alpha/2} \right)$ |
| (3) $\left[\bar{X} - \frac{1}{2} Z_{\alpha/2}, \bar{X} + \frac{1}{2} Z_{\alpha/2} \right]$ | (4) $\left(\bar{X} - \frac{Z_{\alpha/2}}{100}, \bar{X} + \frac{Z_{\alpha/2}}{100} \right)$ |

Options :

92090625141. 1

92090625142. 2

92090625143. 3

92090625144. 4

Question Number : 87 Question Id : 9209066358 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \dots, X_n$ be a random sample from the population with probability density function $f(x) = e^{-(x-\theta)}, x > \theta$ and $\theta > 0$. The estimate of θ by method of moments is

- | | |
|----------------|-------------------|
| (1) $\bar{X}$ | (2) $\bar{X} - 1$ |
| (3) $2\bar{X}$ | (4) $3\bar{X}$ |

Options :

92090625145. 1

92090625146. 2

92090625147. 3

92090625148. 4

Question Number : 87 Question Id : 9209066358 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \dots, X_n$ समष्टि से एक यादृच्छिक प्रतिदर्श है जिसका $f(x) = e^{-(x-\theta)}, x > \theta$ तथा $\theta > 0$ प्रायिकता घनत्व फलन है। तब आघूर्ण विधि द्वारा θ का आकलन है -

- | | |
|----------------|-------------------|
| (1) $\bar{X}$ | (2) $\bar{X} - 1$ |
| (3) $2\bar{X}$ | (4) $3\bar{X}$ |

Options :

92090625145. 1

92090625146. 2

92090625147. 3

92090625148. 4

Question Number : 88 Question Id : 9209066359 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Cramer-Rao lower bound for the variance of an unbiased estimator of θ in case a sample of size n is drawn from the exponential $\left(\frac{2}{\theta}\right)$ population is

(1) $\frac{\theta^2}{n}$

(2) $\frac{\theta^2}{\sqrt{n}}$

(3) $\frac{2\theta^2}{n}$

(4) $\frac{2\theta^2}{\sqrt{n}}$

Options :

92090625149. 1

92090625150. 2

92090625151. 3

92090625152. 4

Question Number : 88 Question Id : 9209066359 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

n आकार के एक नमूने को चरघातांकी $\left(\frac{2}{\theta}\right)$ समष्टि से निकाला जाता है तब, θ के एक अनभिनत आकलक के प्रसरण के लिए क्रामर-राव निम्न परिबन्ध है -

(1) $\frac{\theta^2}{n}$

(2) $\frac{\theta^2}{\sqrt{n}}$

(3) $\frac{2\theta^2}{n}$

(4) $\frac{2\theta^2}{\sqrt{n}}$

Options :

92090625149. 1

92090625150. 2

92090625151. 3

92090625152. 4

Question Number : 89 Question Id : 9209066360 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A random sample of size n is drawn from the population with probability density function $f(x, \theta) = \frac{2x}{\theta^2}, 0 < x < \theta$. Suppose $X_{(n)}$ denotes the largest sample observation and $E(\lambda X_{(n)}) = \theta$. Then the value of λ is given by

- | | |
|-------------------------|-----------------------|
| (1) $\frac{1}{2}$ | (2) $\frac{2}{3}$ |
| (3) $\frac{(2n+1)}{2n}$ | (4) $\frac{(n+1)}{n}$ |

Options :

92090625153. 1
 92090625154. 2
 92090625155. 3
 92090625156. 4

Question Number : 89 Question Id : 9209066360 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

n आमाप का एक यादृच्छिक नमूना उस समष्टि से निकाला जाता है जहाँ $f(x, \theta) = \frac{2x}{\theta^2}, 0 < x < \theta$ प्रायिकता घनत्व फलन है। माना $X_{(n)}$ बृहत नमूना प्रेक्षण को दर्शाता है तथा $E(\lambda X_{(n)}) = \theta$. तब λ का मान दिया जाता है-

- | | |
|-------------------------|-----------------------|
| (1) $\frac{1}{2}$ | (2) $\frac{2}{3}$ |
| (3) $\frac{(2n+1)}{2n}$ | (4) $\frac{(n+1)}{n}$ |

Options :

92090625153. 1
 92090625154. 2
 92090625155. 3
 92090625156. 4

Question Number : 90 Question Id : 9209066361 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If T_1 and T_2 are two unbiased estimators of $\gamma(\theta)$ with efficiencies $\frac{1}{2}$ and $\frac{1}{3}$ respectively and ρ is Karl Pearson coefficient of correlation between T_1 and T_2 , then $\left(\rho - \frac{1}{\sqrt{6}}\right)^2$ will always be less than

- | | |
|-------------------|-------------------|
| (1) $\frac{1}{3}$ | (2) $\frac{1}{2}$ |
| (3) $\frac{3}{4}$ | (4) $\frac{4}{5}$ |

Options :

92090625157. 1
92090625158. 2
92090625159. 3
92090625160. 4

Question Number : 90 Question Id : 9209066361 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

यदि T_1 तथा T_2 , $\gamma(\theta)$ के दो अनभिनत आकलक हैं जिनकी दक्षता क्रमशः $\frac{1}{2}$ तथा $\frac{1}{3}$ हैं तथा ρ , T_1 व T_2

के बीच के सहसंबंध का कार्ल-पियरसन गुणांक है। तब $\left(\rho - \frac{1}{\sqrt{6}}\right)^2$ सदैव इससे कम होगा -

- | | |
|-------------------|-------------------|
| (1) $\frac{1}{3}$ | (2) $\frac{1}{2}$ |
| (3) $\frac{3}{4}$ | (4) $\frac{4}{5}$ |

Options :

92090625157. 1
92090625158. 2
92090625159. 3
92090625160. 4

Question Number : 91 Question Id : 9209066362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

When sample of size 125 is drawn from normal population with parameters $(100, \sigma^2)$ and for testing $H_0 : \sigma^2 = \sigma_0^2$ against $H_1 : \sigma^2 \neq \sigma_0^2$, if a is the value of test statistic (Z-value) computed from sample and $P(\text{test-statistic} < a) = 1 - \delta$ then p-value of test is

- | | |
|----------------------------|------------------|
| (1) δ | (2) $1 - \delta$ |
| (3) $1 - \frac{\delta}{2}$ | (4) 2δ |

Options :

- 92090625161. 1
- 92090625162. 2
- 92090625163. 3
- 92090625164. 4

Question Number : 91 Question Id : 9209066362 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

जब आमाप (साइज) 125 का नमूना प्रसामान्य समष्टि से, जिसके प्राचल $(100, \sigma^2)$ हैं, निकाला जाता है तथा $H_0 : \sigma^2 = \sigma_0^2$ प्रतिकूल $H_1 : \sigma^2 \neq \sigma_0^2$ के परीक्षण के लिए, यदि α नमूने से अभिकलित परीक्षण प्रतिदर्शज (Z-मान) का मान है तथा $P(\text{परीक्षण प्रतिदर्शन} < \alpha) = 1 - \delta$, तब परीक्षण का p-मान है-

- | | |
|----------------------------|------------------|
| (1) δ | (2) $1 - \delta$ |
| (3) $1 - \frac{\delta}{2}$ | (4) 2δ |

Options :

- 92090625161. 1
- 92090625162. 2
- 92090625163. 3
- 92090625164. 4

Question Number : 92 Question Id : 9209066363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

From a normal population with unknown variance, a sample of size 25 with mean = 30 and sample variance $(s^2) = 16$ is selected for testing $H_0 : \mu = 28$ against $H_1 : \mu \neq 28$. The value of the test statistic is

- | | |
|----------|----------|
| (1) -5 | (2) 2.5 |
| (3) 1.25 | (4) 6.25 |

Options :

- 92090625165. 1
- 92090625166. 2
- 92090625167. 3
- 92090625168. 4

Question Number : 92 Question Id : 9209066363 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

अज्ञात प्रसरण के साथ एक प्रसामान्य समष्टि से, आमाप 25 का नमूना जिसका माध्य = 30 तथा प्रतिदर्श प्रसरण (s^2) = 16 परीक्षण के लिए चुना जाता है जहाँ $H_0 : \mu = 28$ प्रतिरोध $H_1 : \mu \neq 28$ तब परीक्षण प्रतिदर्शन का मान है -

- | | |
|----------|----------|
| (1) -5 | (2) 2.5 |
| (3) 1.25 | (4) 6.25 |

Options :

92090625165. 1
92090625166. 2
92090625167. 3
92090625168. 4

Question Number : 93 Question Id : 9209066364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A random sample of size 16 from a normal population with standard deviation = 4 has mean = 27. For testing $H_0 : \mu = 30$ against $H_1 : \mu < 30$, the p-value of the test is

[If $X \sim N(0, 1)$, then $P[|X| \leq 1] = 0.6826$, $P[|X| \leq 2] = 0.9544$, $P[|X| \leq 3] = 0.9973$]

- | | |
|-------------|-------------|
| (1) 0.00270 | (2) 0.04565 |
| (3) 0.31745 | (4) 0.00135 |

Options :

92090625169. 1
92090625170. 2
92090625171. 3
92090625172. 4

Question Number : 93 Question Id : 9209066364 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

प्रसामान्य समष्टि से आमाप 16 का एक यादृच्छिक प्रतिदर्श जिसका मानक विचलन = 4 है, माध्य = 27 रखता है। $H_0 : \mu = 30$ प्रतिरोध $H_1 : \mu < 30$ के परिक्षण के लिए, परीक्षण का p-मान है -

[यदि $X \sim N(0, 1)$, तब $P[|X| \leq 1] = 0.6826$, $P[|X| \leq 2] = 0.9544$, $P[|X| \leq 3] = 0.9973$]

- | | |
|-------------|-------------|
| (1) 0.00270 | (2) 0.04565 |
| (3) 0.31745 | (4) 0.00135 |

Options :

92090625169. 1
92090625170. 2

92090625171. 3

92090625172. 4

Question Number : 94 Question Id : 9209066365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_1, X_2, \dots, X_n$ be a random sample from normal population $N(\theta, \sigma^2)$, σ^2 known and $W_0 = \left\{ (X_1, X_2, \dots, X_n) : \bar{X} < \theta_0 - \frac{\sigma}{\sqrt{n}} Z_\alpha \right\}$ is the critical region for testing $H_0 : \theta = \theta_0$, against $H_1 : \theta = \theta_1$ ($\theta_1 < \theta_0$), then power of test is

$$\left[\text{Use } \Phi(\omega) = \int_{-\infty}^{\omega} \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}} dx \right]$$

(1) $\Phi\left(\frac{\theta_0 - \theta_1}{\sigma/\sqrt{n}} - z_\alpha\right)$

(2) $1 - \Phi\left(\frac{\theta_0 - \theta_1}{\sigma/\sqrt{n}} + z_\alpha\right)$

(3) $\Phi\left(\frac{\theta_0 - \theta_1}{\sigma/\sqrt{n}} + z_\alpha\right)$

(4) $\Phi\left(\frac{\theta_1 - \theta_0}{\sigma/\sqrt{n}} - z_\alpha\right)$

Options :

92090625173. 1

92090625174. 2

92090625175. 3

92090625176. 4

Question Number : 94 Question Id : 9209066365 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_1, X_2, \dots, X_n$ प्रसामान्य समष्टि $N(\theta, \sigma^2)$ से यादृच्छिक नमूना है, σ^2 ज्ञात है

तथा $W_0 = \left\{ (X_1, X_2, \dots, X_n) : \bar{X} < \theta_0 - \frac{\sigma}{\sqrt{n}} Z_\alpha \right\}$ $H_0 : \theta = \theta_0$, प्रतिरोध $H_1 : \theta = \theta_1$ ($\theta_1 < \theta_0$) के परीक्षण के लिए क्रांतिक क्षेत्र है, तब परीक्षण की पावर है -

$$\left[\Phi(\omega) = \int_{-\infty}^{\omega} \frac{1}{\sqrt{2\pi}} e^{-\frac{x^2}{2}} dx \right]$$

(1) $\Phi\left(\frac{\theta_0 - \theta_1}{\sigma/\sqrt{n}} - z_\alpha\right)$

(2) $1 - \Phi\left(\frac{\theta_0 - \theta_1}{\sigma/\sqrt{n}} + z_\alpha\right)$

(3) $\Phi\left(\frac{\theta_0 - \theta_1}{\sigma/\sqrt{n}} + z_\alpha\right)$

(4) $\Phi\left(\frac{\theta_1 - \theta_0}{\sigma/\sqrt{n}} - z_\alpha\right)$

Options :

92090625173. 1

92090625174. 2

92090625175. 3

92090625176. 4

Question Number : 95 Question Id : 9209066366 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $X_i, i=1, 2, \dots, 5$ be a random sample of size 5 from Bernoulli distribution with the parameter $\theta (0 < \theta < 1)$. For testing the null hypothesis $H_0 : \theta = \frac{1}{8}$ against the alternative hypothesis $H_1 : \theta = \frac{1}{4}$, value of test statistics is $Y = \sum_{r=1}^5 X_r$. If H_0 is rejected, when $Y \geq 4$, then probability of type II error is

- | | |
|-----------|-------------|
| (1) 1/64 | (2) 63/64 |
| (3) 1/256 | (4) 255/256 |

Options :

92090625177. 1

92090625178. 2

92090625179. 3

92090625180. 4

Question Number : 95 Question Id : 9209066366 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

माना $X_i, i=1, 2, \dots, 5$ बर्नूली बंटन से आमाप 5 का यादृच्छिक नमूना है, जिसका प्राचल $\theta (0 < \theta < 1)$ है। परीक्षण के लिए निराकरण्य परिकल्पना $H_0 : \theta = \frac{1}{8}$ प्रतिरोध वैकल्पिक परिकल्पना $H_1 : \theta = \frac{1}{4}$, के परीक्षण के लिए तब परीक्षण प्रतिदर्शन का मान $Y = \sum_{r=1}^5 X_r$ है। यदि H_0 बहिष्कृत है, जब $Y \geq 4$, तब प्रकार II त्रुटि की प्रायिकता है -

- | | |
|-----------|-------------|
| (1) 1/64 | (2) 63/64 |
| (3) 1/256 | (4) 255/256 |

Options :

92090625177. 1

92090625178. 2

92090625179. 3

92090625180. 4

Question Number : 96 Question Id : 9209066367 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the confounded effect(s) from the following sub blocks

(1)	<i>b</i>
<i>bc</i>	<i>c</i>
<i>a</i>	<i>ab</i>
<i>abc</i>	<i>ac</i>

(1) AB

(2) BC

(3) AC

(4) ABC

Options :

92090625181. 1

92090625182. 2

92090625183. 3

92090625184. 4

Question Number : 96 Question Id : 9209066367 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

निम्न उप-ब्लॉक से संकरण प्रभाव की पहचान करे -

(1)	<i>b</i>
<i>bc</i>	<i>c</i>
<i>a</i>	<i>ab</i>
<i>abc</i>	<i>ac</i>

(1) AB

(2) BC

(3) AC

(4) ABC

Options :

92090625181. 1

92090625182. 2

92090625183. 3

92090625184. 4

Question Number : 97 Question Id : 9209066368 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

To study the equality of average scores, a school administrator wants to test the consistency of scores in three statistics classes each containing 5, 7 and 6 students and prepare an ANOVA table. If the sum of squares between groups is 500; and total sum of squares is 900, then the value of F-Statistics used for testing equality of class scores is

- | | |
|-----------|-----------|
| (1) 1 | (2) 6.375 |
| (3) 2.125 | (4) 9.375 |

Options :

92090625185. 1
92090625186. 2
92090625187. 3
92090625188. 4

Question Number : 97 Question Id : 9209066368 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

औसत स्कोर की समानता के अध्ययन के लिए, कोई स्कूल प्रशासक तीन सांख्यिकी कक्षाओं में, जिसमें प्रत्येक कक्षा में 5, 7 तथा 6 छात्र हैं, स्कोर की संगति का परीक्षण चाहता है तथा ANOVA सारणी तैयार करता है। यदि समूहों के बीच में वर्गों का योग 500 है तथा वर्गों का कुल योग 900 है, तब कक्षा स्कोर के परीक्षण की समानता के लिए प्रयोग F-सांख्यिकी का मान है -

- | | |
|-----------|-----------|
| (1) 1 | (2) 6.375 |
| (3) 2.125 | (4) 9.375 |

Options :

92090625185. 1
92090625186. 2
92090625187. 3
92090625188. 4

Question Number : 98 Question Id : 9209066369 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A school administrator, interested in studying the equality of average scores, wants to test the consistency of scores in three statistics classes having 5, 7 and 6 students and prepares ANOVA table. The sum of squares within groups is 500 and total sum of squares is 800.

Then the value of F-statistic used for testing equality of average class scores is

- | | |
|----------|---------|
| (1) 0.5 | (2) 1.5 |
| (3) 12.5 | (4) 4.5 |

Options :

92090625189. 1
92090625190. 2

92090625191. 3

92090625192. 4

Question Number : 98 Question Id : 9209066369 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

औसत स्कोर की समानता के अध्ययन के लिए, कोई स्कूल प्रशासक तीन सांख्यिकी कक्षाओं में, जिसमें प्रत्येक कक्षा में 5, 7 तथा 6 छात्र हैं, स्कोर की संगति का परीक्षण चाहता है तथा ANOVA सारणी तैयार करता है। यदि समूहों के बीच में वर्गों का योग 500 तथा वर्गों का कुल योग 800 है, तब औसत कक्षा स्कोर के परीक्षण की समानता के लिए प्रयुक्त F-सांख्यिकी का मान है -

(1) 0.5

(2) 1.5

(3) 12.5

(4) 4.5

Options :

92090625189. 1

92090625190. 2

92090625191. 3

92090625192. 4

Question Number : 99 Question Id : 9209066370 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For a 3^2 factorial experiment, the quadratic effect for factor A is given by

(1) $(a^2 - 1)(b^2 - 1)$

(2) $(a^2 - 2a + 1)(b^2 - 1)$

(3) $(a^2 - 2a + 1)(1 + b + b^2)$

(4) $(1 + a + a^2)(1 + b + b^2)$

Options :

92090625193. 1

92090625194. 2

92090625195. 3

92090625196. 4

Question Number : 99 Question Id : 9209066370 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

3^2 क्रमगुणित प्रयोग के लिए, घटक A के लिए द्विघात प्रभाव दिया जाता है -

- | | |
|-----------------------------------|----------------------------------|
| (1) $(a^2 - 1)(b^2 - 1)$ | (2) $(a^2 - 2a + 1)(b^2 - 1)$ |
| (3) $(a^2 - 2a + 1)(1 + b + b^2)$ | (4) $(1 + a + a^2)(1 + b + b^2)$ |

Options :

92090625193. 1
92090625194. 2
92090625195. 3
92090625196. 4

Question Number : 100 Question Id : 9209066371 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

To study the equality of average scores, a school administrator wants to test the consistency of scores in three statistics classes each containing 5, 7 and 6 students and prepare an ANOVA table. If sum of squares between groups is 475 and total sum of squares is 600, then the value of mean error sum of squares is

- | | |
|----------|----------|
| (1) 14/5 | (2) 25/3 |
| (3) 15/2 | (4) 19/8 |

Options :

92090625197. 1
92090625198. 2
92090625199. 3
92090625200. 4

Question Number : 100 Question Id : 9209066371 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

औसत स्कोर की समानता के अध्ययन के लिए, कोई स्कूल प्रशासक तीन सांख्यिकी कक्षाओं में, जिसमें प्रत्येक कक्षा में 5, 7 तथा 6 छात्र हैं, स्कोर की संगति का परीक्षण चाहता है तथा ANOVA सारणी तैयार करता है। यदि समूहों के बीच में वर्गों का योग 475 तथा वर्गों का कुल योग 600 है, तब औसत कक्षा स्कोर के परीक्षण की समानता के लिए प्रयुक्त F-सांख्यिकी का मान है -

- | | |
|----------|----------|
| (1) 14/5 | (2) 25/3 |
| (3) 15/2 | (4) 19/8 |

Options :

92090625197. 1
92090625198. 2
92090625199. 3
92090625200. 4